

# THE CITY OF AKHENATEN

## PART I

EXCAVATIONS OF 1921 AND 1922  
AT EL-'AMARNEH

BY

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AND

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WITH CHAPTERS BY

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WITH SIXTY-FOUR PLATES

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The following abbreviations are used in quotations both in text and notes:—

*Ä.Z.* .... *Zeitschrift für ägyptische Sprache.*  
*Ann. Serv.* .... *Annales du Service des Antiquités.*  
**DAVIES** .... N. DE G. DAVIES, *The Rock Tombs of El Amarna* (Archaeological Survey of Egypt), six vols. London, 1903-1908.  
*J.E.A.* .... *Journal of Egyptian Archaeology.*  
*M.D.O.G.* .... *Mittheilungen der Deutschen Orient-Gesellschaft.*  
**PETRIE** .... W. M. FLINDERS PETRIE, *Tell el Amarna.* London, 1894.  
**TIMME** .... PAUL TIMME, *Tell el-Amarna vor der deutschen Ausgrabung im Jahre 1911.* Leipzig, 1917.

## INTRODUCTION.

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THE site known to Europeans as Tell el-'Amarneh lies on the east bank of the Nile about 192 miles above Cairo. It is a great sandy plain shut in between the Nile and the cliffs of the high desert, which, after touching the river at Shêkh Sa'îd retire in a vast curve and come forward once more to approach the river six miles farther south near el-Hawaṭeh, thus enclosing a semicircular plain with the river as diameter and the hills as circumference. This district is still known to the natives as el-'Amarneh, from the tribe of the Beni 'Amrân who settled here not later than the early eighteenth century A.D., occupying villages on both banks of the Nile, but chiefly on the east.<sup>1</sup> On this side their main villages are, beginning from the north, et-Til, el-Hâg Kandil,<sup>2</sup> el-'Amâriyeh and el-Hawaṭeh. Any one of the villages may for purposes of distinction be followed by the name of the district, and in this manner et-Til may become Til-el-'Amarneh, *i.e.* et-Til of the el-'Amarneh district. Early modern visitors to the site asking the name of the village and hearing Til-el-'Amarneh wrongly assumed that Til was here the word *tell*, which means a mound (*cf.* Tell el-Kebîr, The Great Mound), and wrote and spoke of the place as Tell el-Amarna. Besides being a solecism the name is ill suited to describe the site of Akhenaten's city and its suburbs, only a small portion of which lies near the village of et-Til, and it is far better to use the more general term el-'Amarneh for the whole site.

In early days the site was visited by Wilkinson, Burton, Champollion, Hay, Nestor l'Hôte, Lepsius and others. In 1883 that indefatigable pioneer Maspero had already begun the clearance of the great rock-tombs, and in 1892 the Archaeological Survey sent out an expedition to copy them, a work interrupted shortly afterwards and not resumed until 1902. In this year Mr. de Garis Davies began the work which ended in the publication under his name of those six volumes on the el-'Amarneh tombs which form one of the most considerable pieces of work accomplished in Egypt by the Egypt Exploration Society.

Meanwhile, in the winter of 1891-2, Flinders Petrie had begun the excavation of the main town site, exploring the Sun Temple, the Royal Palace and some private houses. His results are published in the volume called *Tell el Amarna* (hereinafter quoted as PETRIE) to which constant reference will here be made. In 1896 Barsanti made some excavations near el-Hawaṭeh on the site which we now know to be that of Maru-Aten, and discovered portions of the painted pavements, now in the Cairo Museum. No adequate account of these excavations has ever been published.

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<sup>1</sup> See DAVIES, *The Rock Tombs of El Amarna* (hereinafter DAVIES), vol. I, p. 1.

<sup>2</sup> The Hagg Kandil or Hajji Kandil of tourist and guide book is incorrect.

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From that time onward no further digging was attempted until the Deutsche Orient-Gesellschaft in 1907 obtained the concession of the site and started a far-reaching project of systematic excavation. In 1914 the German concession was withdrawn. In 1917 there was published a survey of the site previous to excavation (PAUL TIMME, *Tell el-Amarna vor der Deutschen Ausgrabung im Jahre 1911*), but the very important results obtained by the expedition are known to us only from short preliminary reports issued in the *M.D.O.G.*, Nos. 34, 46, 50, 52, 55 and 57.<sup>1</sup>

In 1920 the Egypt Exploration Society applied for and obtained the site. Two seasons' work have now been carried out. In the spring of 1921 Professor T. E. Peet took charge of the excavations, accompanied by Mr. F. G. Newton as architect, and by Messrs. A. G. K. Hayter, A. R. Perry and P. L. O. Guy. In the autumn of the same year the excavations were resumed and continued into the spring of 1922<sup>2</sup> under the direction of Mr. C. L. Woolley, Mr. F. G. Newton being again responsible for the architectural side, Mr. Battiscombe Gunn for the inscriptional, and Mr. P. L. O. Guy being archaeological assistant. This volume deals with the results of the two seasons. Preliminary reports have appeared in the *J.E.A.*, VII, pp. 169 ff., and VIII, pp. 48 ff.

From the outset it was obvious that our main work at el-'Amarneh must be the continuation of the uncovering of the main town site so systematically and laboriously begun by our German predecessors. To this programme we have not been unfaithful; we have greatly extended the cleared area, and prepared plans which in practically all cases fit on to those of the Deutsche Orient-Gesellschaft, which unfortunately, up to the present have been published only on a very small scale. Every effort has been made to make our work continuous with the earlier, and the German system of numbering each house in accordance with its position in the squares of Timme's survey has therefore been adopted.

At the same time we felt, rightly as has since been proved, that the solution of the problems which still beset the history of Akhenaten's period might in some cases be more easily reached by extending the field of excavation. It was with this in view that, in 1921, we first attacked the eastern valley, where we found the Eastern Village and the tomb-chapels, both of which have given results of importance for the history of the "heresy." The same conviction led, in 1922, to the excavation of Maru-Aten and the river-temple site, both of which have yielded more actual history than almost any part of the main town. This policy has had another advantage in that it has enabled us to undertake each season some piece of work which could be definitely completed in that season, while at the same time slowly and surely carrying on the clearance of the main site, which in any case must be a matter of years.

The report on the houses of the main city is the joint work of Professor Peet and Mr. Woolley:<sup>3</sup> Professor Peet is mainly responsible for that on the funerary chapels, Mr. Woolley for that on the Eastern Village. Mr. Woolley is alone responsible for the accounts

<sup>1</sup> The last was partially reprinted in the *Smithsonian Report* for 1915, pp. 445-457.

<sup>2</sup> Objects from the first of these excavations are numbered 21/1, 21/2 etc.; objects from the second 22/1, 22/2, etc. Pottery forms the only exception to this system.

<sup>3</sup> The former must, however, accept full responsibility for Chapter II. written entirely after Mr. Woolley's departure for Mesopotamia.

of the River Temple and of Maru-Aten. Professor Peet deals with all inscribed material found in the first season, Mr. Battiscombe Gunn with that of the second. Nearly all the plans, etc., and most of the drawings are the work of Mr. Newton. The pottery was throughout both seasons in the hands of Mr. P. L. O. Guy. The plates of vases are drawn by him and the explanatory Chapter VII is based on his notes. The colour sketches of painted vases are from the hand of Mr. Newton.

It need hardly be pointed out that in a report of this nature much that is written under the name of the director of an expedition is actually the product of the hands and brains of the other members of the party. Both leaders are fully conscious of this, and grateful for the ungrudging support given to them by the staffs of the two expeditions. They would especially acknowledge their indebtedness to Mr. Newton, whose knowledge of architecture and long training on archaeological sites have made him something infinitely more than a drawer of plans. Without his assistance scientific work on the architectural features of the site would have been virtually impossible, and most of our results in this direction would never have been obtained.<sup>1</sup>

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<sup>1</sup> One of the writers wishes to pay a tribute here to the admirably kept Field Note Books of Mr. A. G. K. Hayter. To few of us is it given to produce, in spite of wind, sand, heat and flies, note-books so neat that they can be referred to as easily as a printed volume.



# THE CITY OF AKHENATEN.

## PART I.

### CHAPTER I.

#### THE MAIN CITY SITE.

##### GENERAL DESCRIPTION OF THE TOWN-MOUNDS.

THE ruins of Akhetaten extend from the point, a mile or so north of et-Til village, where the limestone cliffs come down to the river, southwards to where, behind the village of el-Hawaṭeh, the flat land narrows down again to nothing between water and cliff; they form the string, as it were, of a bow whose arc is represented by the great inland bend of the upper desert plateau. The total length of the ruined town, with its outlines, is something like 9 kilometres; its width is seldom much more than a kilometre. This is the natural result of the local conditions. The fertile ground along the Nile bank is too valuable to be encroached on to any great extent; while the lack of water makes it uneconomic to build far out in the desert. Consequently the town is crowded up into that narrow strip on the edge of the waste, where the land is valueless for farming, but where water for house and garden can be drawn up from wells without overmuch labour, or carried from not too great a distance.

Away to the north, under the great headland in which the hills come down to the river, is a village which certainly served as a fortified outpost defending the northern entrance to the plain. Very little work has been done here, except for a trial by the Deutsche Orient-Gesellschaft in 1907,<sup>1</sup> but the mounds are imposing, and the whole site looks promising. There are sporadic remains, partly of late date, between this village and the main line of town mounds, which begins at the village of et-Til, and continues without interruption for 5 kilometres to peter out gradually at the village of el-Hawaṭeh.<sup>2</sup> South of this, after an interval, lies the site of Maru-Aten (see Chap. V); and finally there are slight traces near el-Hawaṭeh of the southern outpost which beyond all doubt existed there. It is not unlikely that the ease with which the great plain could be blocked at its north and south ends had much to do with its choice by the king as a seat for his new worship, the possibility of armed opposition to which can have been by no means remote.

Within the main area of the city there is a curious inconsequence of arrangement. Up to the present there is no evidence of the grouping of people of various classes or trades in different

<sup>1</sup> *M.D.O.G.*, 34, pp. 19–20; *TIMME*, p. 21.

<sup>2</sup> *TIMME*, pp. 22–23; *M.D.O.G.*, 34, p. 19.

quarters of the town. High-Priest rubs shoulders with leather-worker, and Vizier with glass-maker. This is doubtless mainly due to the fact that at the moment of arrival on the new site the wealthier and more influential citizens marked out their claims at such intervals as to leave more ample space for their houses and gardens than they actually intended to use or succeeded in using. The poorer population were thus forced to fill in the spaces between the estates of the rich, for to go farther afield would have taken them out of the region of easy water-supply and involved an uneconomic increase of distances in general.

At the same time it is possible to trace a certain regularity in the town. Three main arteries seem to have traversed it from north to south. The most easterly of these is that cleared for a considerable distance by the German excavators and called by them the High-Priest Street.<sup>1</sup> This has in places a width of more than 50 metres, and has so far been traced from M. 51 to Q. 46,<sup>2</sup> being interrupted only in P. 48 by the action of water, which has wrought great havoc with the ruins in that area, and formed a shallow valley running from east to west (marked *Wâdî* in the German plans), and dividing the town-site into two halves. This street, like all others in the town, had no paving of any kind.

Parallel to the High-Priest Street, and about 160 metres west of it, ran a less imposing street, the greater part of which was laid bare by the excavations of 1921 (Pl. I). Its existence had been suspected by the Germans, who had found its south end in L. 50, and the point at which it was interrupted by the watercourse in O. 48, as well as its continuation north of the watercourse in O. 47 and P. 47. To this street we gave the name of Street A.

Still farther to the west lies a modern road, *Sikket es-Sultân*, which forms the shortest route from el-Hâg Kandil to et-Til and is constantly used by the inhabitants of the two villages. This road has been assumed by Borchardt to occupy the position of the main street of Akhetaten, leading from the palace and temple quarters near et-Til to the equally important quarter near el-Hâg Kandil.<sup>3</sup> He is even inclined to think that it may have existed as a country road before the building of the town. This must be regarded as a mere surmise, but Borchardt is probably right in his main contention. Although little excavation has been done along the road it does indeed seem to be free from remains and to be flanked on either side by house-mounds. It is obvious that later dwellers near the site, in making their way through the ruins, would follow the line of least resistance, and that such a line would be afforded by the old main streets of the town.

These main arteries were of course connected up by narrower streets running east and west and so crossing them at right angles. A glance at the plan will reveal numbers of these, and will also show that they vary considerably in width and seldom preserve a constant direction. In fact it may be said that the excavations up to the present have revealed little attempt at town-planning. There is, it is true, some effort to group the houses, though in imperfect alignment, along the three main north-and-south streets; but this is all, for the cross streets were left almost entirely to chance, and were little more than passages between one house and another. One of the best examples is that cleared by us in 1921, and marked Street C (Pl. I). It runs east and west along the great block of houses in

<sup>1</sup> See plan *M.D.O.G.*, 55, Blatt 1 = *Smithsonian Report for 1915*, Pl. 1.

<sup>2</sup> For the meaning of these symbols see below, p. 3.

<sup>3</sup> *M.D.O.G.*, 55, pp. 8-9.

N. 49 which ends with N. 49.18, the house of Ra'nûfer. Others, however, are much less regular; they twist and turn between high walls, often not at right angles, and may end as *culs de sac* in the heart of an *insula*, or may unexpectedly broaden out on to a well-square or main street. Here there is no attempt at planning at all, and it becomes clear that, while the general lines of the town may have been laid down according to a plan, yet, when it came to the building of *insulae* or of houses, each man followed his own convenience only.

The work accomplished by the German expedition on the town site may be roughly summed up as follows. They began at the south end and on the mounds farthest to the east, having found by a preliminary trial that these had been much less disturbed by *sebâkh*-diggers than those nearer the river, and having also observed that they were in general larger in size. Here they discovered the High-Priest Street, which they followed northward for nearly a kilometre and a half, excavating the adjoining blocks of houses on either side of the road. In addition to this they cleared both the north and the south edges of the water-course (*wâdi*), referred to above, p. 2, and also carried out some clearances in the bed of this watercourse itself.

It was manifest that the continuation of this systematic clearance of the town was a legacy to which we must not prove false, and our work in the town has been planned entirely on these lines. Thus in 1921 we set out with the deliberate object of laying bare the small quarter of houses lying between the High-Priest Street and the suspected Street A, thus completing a block of which the Germans had already worked the fringe. Similarly in 1922 the German work to the north of the watercourse was continued by the clearing of two large groups of houses, one in square O. 47 and the other in P. 47. In addition to this a few houses were excavated in K. 50, K. 51, and L. 51, which do not fit directly on to the old work. Here the reason for departing from our principle was that these houses gave promise of being of importance, and the experiment was justified by the finding among them of the finest house yet excavated at el-'Amarneh, that of the Vizier Nakht.

In planning the town-mounds the German system has been followed. The site is divided up for reference purposes into squares of 200 metres side. These are numbered in the usual way, in the north and south sense by letters, A, B, C and so on, and in the east and west sense by figures, 1, 2, 3 and so on. That portion of the town-mounds proper worked by the Germans and ourselves mainly lies between L and R, and between 45 and 51. Within each separate square the houses have been serially numbered in the order of discovery. Thus the house of the sculptor Dhoutmôse is P. 47.2, while the house of the High-Priest is O. 49.1.

#### POSITION OF THE SECTIONS EXCAVATED IN 1921 AND 1922.

The position of the section cleared in 1921, with respect to the German work, has already been described; the plan is reproduced on Pl. I. It will be best understood if it be noted that the whole of the long local<sup>1</sup> north to south strip excavated is bordered on the west by a broad road, to which we have given the name Street A. It runs northward beyond the limits of our plan, and was indeed first found by the German excavators<sup>2</sup>

<sup>1</sup> For explanation of this term see below, p. 38, n. 2.

<sup>2</sup> M.D.O.G., 55, p. 8.

at the point where it is interrupted by the watercourse described above, p. 2. Taking our stand at this point and thence moving south we find on our left the lofty garden walls of two large houses, O. 48.8 (excavated by the German expedition), and O. 48.17. Then comes Street C, leading off at right angles into the High-Priest Street. After this interruption follow three more large properties, O. 49.24, O. 49.23, and N. 49.10. So far the street has been perfectly straight, except for the curious little house N. 49.16, perhaps of later date, which juts out into it. Now, however, the whole road appears to be completely blocked by a group of smaller houses, which force us to take a sharp detour to the right. After this Street A continues, though in a slightly different direction, past the walls of three large properties, the houses of which have not yet been excavated. Then with a further slight bend to the right it skirts the garden and house-wall of the imposing N. 49.18, the house of Ra'nûfer. Next we come upon Street C, leading away to the left into the High-Priest Street, and badly damaged by a watercourse. Beyond this point we did not trace the street, for we turned our attention to the long line of houses forming the north side of Street C, namely, N. 49.33, 19, 32, 20, 31, 14, and N. 50.30. The houses backing on to these, namely, N. 49.34, 35, 36 and 37, were perhaps entered from a street on their north side, which has not yet been fully traced out. The group of houses east of these, namely, N. 49.12, 22, 23, 15 and 21, seems to have been reached by devious passages from the High-Priest Street on the east, though in the present state of the excavation it is impossible to be certain of this.

The group lying to the extreme south of the plan, N. 49.38, 39, M. 50.13, 16, 15 and 14, cleared in 1922, still needs supplementary excavation to determine the position of the garden frontages.

The very conspicuous corner and bend in Street A described above are typical of the inconsequent laying out of the city. It is probable that the street was begun from two ends by wealthy citizens setting out their gardens at their own whim and with little regard to the subsequent appearance of the whole town. The result is that, though in the two halves there is a fairly accurate alignment of walls, there is a serious discrepancy at the point of meeting.

The work done on the town-mounds in 1922 (Pls. II and III) has added perhaps less to our knowledge of the laying-out of Akhetaten, for the simple reason that it was subsidiary to the main operations of the season, the clearance of the Eastern Village, the excavation of Maru-Aten, and the investigation of the river-temple site. It has, however, corroborated what was already suspected from the appearance of the mounds and from the German trials, namely, that the houses of the more important and wealthy citizens of Akhetaten were by no means confined to the desert side of the town in the area of the High-Priest Street, for the immense house of the Vizier Nakht, the finest yet excavated, lies comparatively close to the cultivation, and there is little doubt that other houses of an almost equal importance are to be looked for in this quarter.

#### DESCRIPTION OF THE HOUSES EXCAVATED IN 1921 AND 1922.

The most striking feature of Akhetaten is the uniformity of plan on which its houses were built. To know one large house is in a sense to know all large houses, and to know one small house is to know all small houses, for the differences are merely those of detail.

What is more, the small house does not differ from the large house in plan, except in so far as it omits what is unessential and simplifies what is complicated.

This being the case, the most practical way of giving the reader a complete idea of the subject will be to describe in full two typical large houses and one of smaller size. He who reads these descriptions will be well acquainted with the essential features of all Akhetaten houses. For the sake of completeness a brief description is added of every house excavated, omitting what is normal, for this can be gathered from the plan, Pls. I, II and III, and inserting only such points as call for special notice. The description of each house is followed by a list, with references to the Object Catalogues of the two seasons, of all objects worthy of mention found in each house.

*House K. 50.1.—The House of the Vizier Nakht (excavated 1922).*

The Vizier's house,<sup>1</sup> K. 50.1, Pls. III and V, like all those of the better class, was raised on a platform (0·60 m. high) made by filling in up to the required level the space enclosed by the outer walls, and was laid out on the normal Akhetaten ground-plan; but its great size (it measured some 35 by 26 metres over all) allowed of an unusually large number of chambers in the domestic quarter. Although in this respect it was not strictly speaking typical, yet it fulfils perhaps better than any other the ideal of the good Akhetaten house.

A flight of shallow steps against the north wall, Pl. V, fig. 5, with a low balustrade wall on the other side, led up to the front door. This was framed in heavy limestone jambs, whereon were inscribed the name and titles and some of the virtues of the owner, Pl. VII, figs. 4 and 6; the surface of the stone was painted yellow and the incised characters were filled in with bright blue paste. Through a lobby dignified by two columns, with whitewashed walls and inner door-frame painted yellow, and through a whitewashed anteroom whose door-jambs, white below, were painted above with horizontal bands of red, blue, yellow and green, one passed into the North Loggia (Pl. V, fig. 3, Room 3 in plan). This was a hall of noble proportions. The ceiling of a brilliant blue was supported by eight wooden columns resting on massive stone bases; the walls, white below, bore near the ceiling a frieze of blue lotus petals on a green ground, with a red

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<sup>1</sup> A certain mystery attaches to the place. Before we started operations the mound showed obvious signs of having been pretty thoroughly worked over not very long ago, and our village workmen assured us that it was one of the sites excavated by Petrie in 1891. When we came to dig we found that the house had, in fact, been previously excavated right down to floor level on the "turning-over" principle, by which the contents of each room are thrown back into the room last cleared; but in this disturbed filling we found over 200 fragments of inscribed limestone, including one piece 0·35 m. long, 0·20 m. wide, and the great inscribed jamb of the front door was discovered virtually *in situ*, though partly in earth recently moved. Petrie would not have overlooked such objects as these,—he expressly mentions that no inscriptions were found by him in any house, and here we had painted inscriptions on the niches as well as the stones,—and he gives no plan of or reference to any such house as this. The Germans did not dig here; the method was not one that they would have employed, and the work was certainly done before they obtained the concession for the site of el-'Amarneh. The curious fact remained that someone had dug the house out, very thoroughly but on a bad system, and with so little care that he had not only thrown away much inscribed material, but had failed to notice the big door-jamb. To us the fact was as lamentable as it was difficult to explain, for rough treatment and partial exposure had wrought havoc on the delicate plaster of the painted niches, and it was indeed sad to realise how much more would have been preserved but for the ignorant and, from the scientific point of view, fruitless work of our unknown predecessor.

band above ; the floor, made, as were all the floors in this house, of large unbaked tiles, had originally been whitewashed, but at a later period had received a fresh coating of mud plaster and had been painted in bright colours, of which only traces of red and yellow remained. In the middle of the south wall, facing the window or windows, wide folding doors, on whose stone frame an incised and painted inscription repeated the Vizier's honours, opened on the Central Hall ; the long expanse of wall on either side of this was broken by smaller single doors. At each end of the hall two doors led to the service chambers ; the three rooms at the north end were perhaps for the accommodation of travellers, who could sleep here without intruding on the intimacy of the domestic quarters ; at the south end, next to the anteroom, was a little chamber containing a cupboard (?), which may have been the porter's private apartment or the store-room where was kept the bedding required for the guests of the house.

The Central Hall (Room 8) was about 8 metres square. Four columns grouped in the centre supported the roof ; in the middle of the south wall, facing the entrance from the North Loggia, a double door with inscribed stone jambs opening on the inner reception-room (Square Room) gave a further effect of spaciousness to what was in itself a spacious apartment. As one entered one saw on the left hand a brick divan which stretched the whole length of the east wall, Pl. V, fig. 2 ; it was raised but slightly above floor level, but was enclosed by a low whitewashed coping wall with three entrances ; it was evidently the place reserved for the master of the house and his more favoured guests. In front of the middle entrance to the divan, between the two eastern column-bases, a circular depression in the paved floor showed where had stood a portable hearth—the brick hearth usual in these reception-rooms had here been replaced by something probably more ambitious. Projecting from the west wall was the square lustration-slab, Pl. V, fig. 4, its raised floor and coping and back screen all of cut stone ; those who would wash went up by a single stone step on to the platform, which measured 2 metres by 1·33, and helped themselves to water out of a great jar which stood in a slight hollow cut in the centre of the paving.

On either side of the hall were two doors; those on the west leading to the West Loggia, those on the east one to the broad flight of stairs that went up to the first floor rooms, one to a passage off which opened bedrooms and store-chambers ; in the south wall a second doorway gave more direct access to the private apartments, and balancing it on the west side of the main folding doors was a painted niche. The ground of this and its frame were painted a bright dark red, which stood out strongly against the prevalent white of the walls : an inscription in yellow hieroglyphs on the frame reiterated the dignities and the merits of Nakht, while 1·50 metres up, on a central yellow panel which ran from top to bottom of the niche, King Akhenaten was portrayed worshipping the cartouches of the Aten.

These details are all clearly shown in Mr. Newton's coloured restoration of this Hall on Pl. IV. Here we look across the room from its north-east corner to its south-west. Every detail reproduced in this restoration including the colouring and the decoration is based on indications actually obtained during the excavations of 1921 and 1922. The restoration of the Central Hall of Ramose, *M.D.O.G.*, 55, Blatt 2, should be compared.

The Central Hall seems to have been lofty, rising well above the two storeys of the domestic quarters adjoining it ; it was lit partly by secondary light coming through the loggia doors, partly by windows of its own set high up under the roof. Barred window-frames cut out of stone were found this year in a small house in another part of the

site (P. 46.11; Pl. VI, fig. 4), and those of Nakht's house were probably of the same type, though perhaps more elaborate. A fragment of plaster with blue and white lotus leaves between bands of red and blue found in this hall may have belonged to a design of coloured festoons round the top of the walls. It must, however, be remembered that the site had been dug before, and that it was therefore impossible to say that, because an object was found in a particular room, it had originally belonged there—indeed, the contrary was the more probable.

The West Loggia (Room 9) was another long verandah-like room, probably with large windows all down one side taking the afternoon sun; it was, one imagines, the winter lounge, used when the North Loggia became uncomfortably cold. Two rows of columns, three in each row, supported the blue-painted ceiling, which again was probably not very high. At either end was a niche adorned with inscriptions—the titles of the Vizier round the frame, and in the centre a short hymn to the Aten<sup>1</sup>—in black characters on a yellow ground, and pictures of the king adoring the cartouches of the god. At either end, too, there was a door, that at the north end opening on to a small chamber (10) of whose use we know nothing, and the southern leading through a lobby (30) to the side entrance of the house.

All these rooms belong to the more public part of the mansion, that in which the guests were entertained and lodged; a wall running right across the house from east to west separated them from the domestic quarter reserved for the family of the Vizier. In the middle of this back part of the house, with double doors opening on the Central Hall, is the inner reception-room (16, Square Room, seen in the background in Pl. V, fig. 6). On a smaller scale it reproduces the main features of the Central Hall itself. A single column stood in the centre, and beside its stone base is a circular bowl-hearth with a hob of mud brick; against the west wall is the railed-in divan with three entrances in its low coping wall, and against the south wall is the stone lustration-slab. A painted niche occupies the south-west corner; and two doors in the south wall lead to cupboard-rooms (17, 18) with cemented floors and broad shelves resting on brickwork supports. A fully-equipped inner reception-room such as this is found only in a few of the largest houses, e.g., that of the High Priest; that it was essentially a private apartment reserved for the use of the household is shown by the fact that in one of the rare cases where it occurs (O. 48.14) it is separated by a passage from the Central Hall, and the doors are so arranged that there is no direct view from one to the other; and by the further fact that in some large houses, where no such room exists, the large room in the south-east corner of the house possesses some of the furnishing of a hall (divan, hearth, etc.) and must have served a double purpose.

The two other chief rooms of the domestic quarter are the bedrooms of the Vizier and his wife. Each of these (Rooms 21 and 27) has the low dais in a slight recess at one end which we are accustomed to regard as characteristic of the man's bedroom. Room 27 possessed as usual its own bathroom (29) and lavatory (28), but unluckily this corner of the house is badly ruined and for the arrangement of the offices we have to look elsewhere. The bathroom and lavatory of Room 21 (Rooms 22 and 23)—if these are such, and not extra bedrooms or dressing-rooms—were built as one long chamber, but were divided off

<sup>1</sup> The fragments show the words "Aten," "thy beauty," "I will give praise to [thy *ka*]."

by a thin screen wall of brick ornamented with moulded panels; the floors were cemented and the walls whitewashed.

Of the remaining chambers, 19 is perhaps a servant's room or a store, 26 is given over to cupboards and might be the master's wardrobe, while 20, 24 and 30 are sections of a

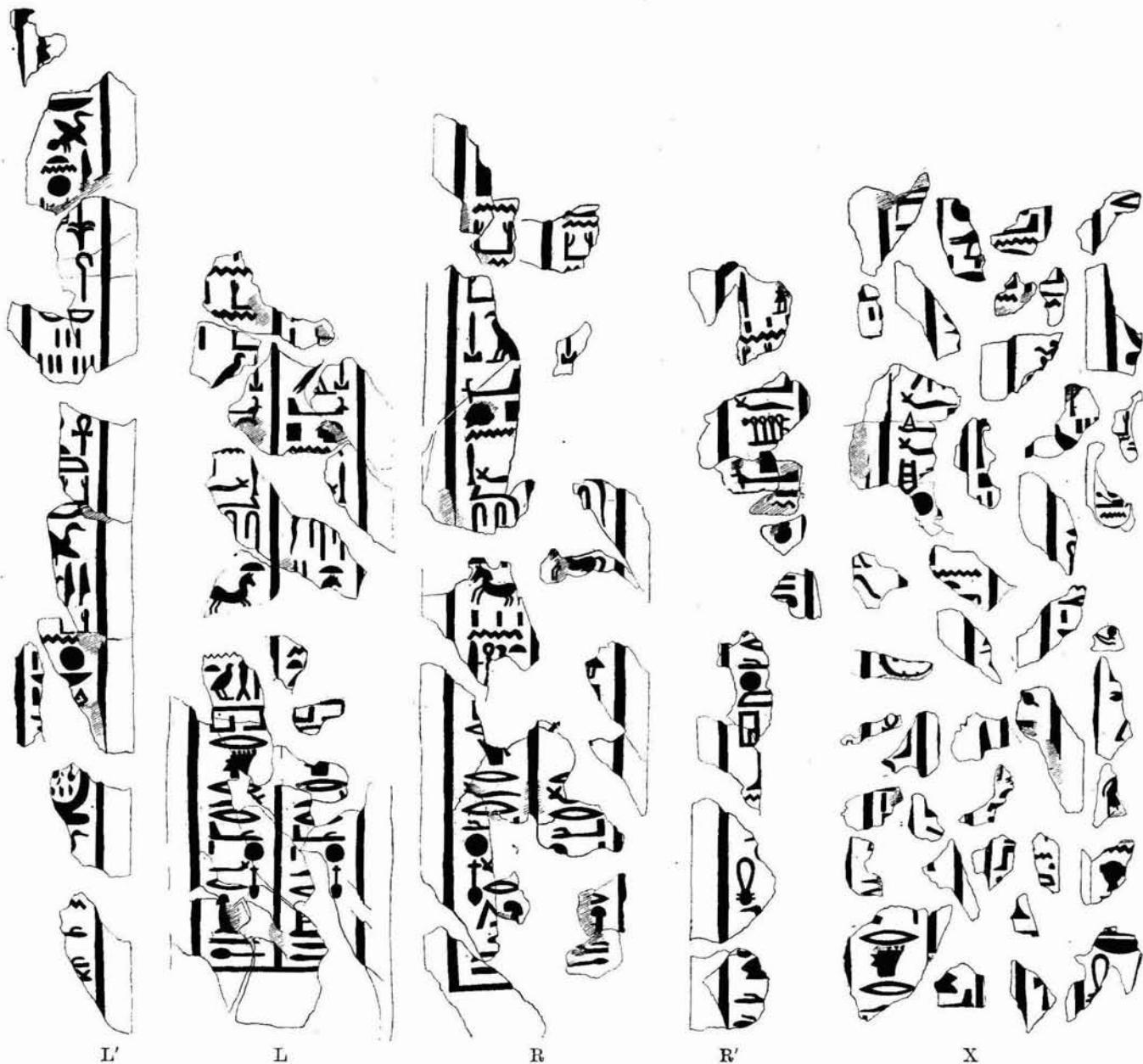


Fig. 1. Inscriptions from door-posts of Ra'nüfer. Scale  $\frac{1}{6}$ .

L. Left post, bottom. L'. Left post, left column, top. R. Right post, bottom.  
R'. Right post, left column, top. X. Unplaced fragments.

NOTE.—The groups of fitted fragments in L' and R' are not in correct relation to one another.

long passage running the whole width of the house (Pl. VIII, fig. 1), and 25 is the passage leading to No. 27.

In the West Loggia we found four fallen column-bases of stone (diam. 0·63 m.), and outside the north wall of the house, in front of the steps, seven other more or less complete

examples (diam. 0·53 and 0·45 m.) and a few fragments. Now there was no place for these in the ground-floor rooms, where all the column-bases were found in position, and they must have come from above, and in this case the places in which they lay are useful evidence. There can be no doubt that there was an upper storey, the walls of which followed the lines of the heavy ground-floor walls, and the general plan of which was similar, except that the Central Hall and (presumably) the inner reception-room rose to the full height of the house and therefore had no rooms above them. But the two loggias were probably not very lofty, and it would seem that the columns of the lower storey were reproduced above by lighter shafts placed immediately over them (assuming an original six bases where four were found and eight where seven remained), thus giving two large galleries—the banqueting-hall and a women's court(?)—along the north and west sides of the house, while bedrooms, kitchens and offices would occupy as much of the other two sides as was not taken up by the staircase. Viewed from the outside, the whole house would form one solid block, the Central Hall and inner reception-room rising slightly above its flat roof, but hidden from sight by a low parapet wall. The lobby at the top of the front steps was probably of one storey only.

*House N. 49.18.—House of Ra'nûfer, Master of the King's Horse (excavated 1921).*

The house was roughly square (see *J.E.A.*, VII, Pl. XXVI, fig. 2, taken from the east, and plan on Pl. I of the present work). On the west it is bounded by Street A, which, however, does not run parallel to the wall of the house. On the south lies Street C. The water which from time to time has found its way along this street has seriously damaged the south walls and rooms of the house. To the east is an enclosure with granaries and well, while to the north is a garden containing a second well.<sup>1</sup> The house is entered by a low flight of nine steps, each 5 cm. high, on the north. These lead through a small anteroom, with a limestone column-base, into the long narrow North Loggia. The door between the anteroom and the loggia had side-posts of stone, the bases of which are still in position (visible in the photograph), while the upper portions were broken into hundreds of fragments found lying scattered about the loggia. These side-posts were inscribed with a short adoration of the Aten by the Master of the King's Horse, Ra'nûfer (Fig. 1, p. 8). The upper parts of each of the four columns of inscription are too incomplete to be restored with profit. The lower parts give the full titles of Ra'nûfer: "for the *ka* of the chief *d;k*<sup>2</sup> of his majesty, overseer of the horses of the whole stable, Ra'nûfer, justified." In this anteroom were also found fragments of a similar inscription which must have come from one of the door-jambs of the doorway leading into this room from the outer steps. The fragments which remain give the first words of the two columns of inscription, each of which began '*nh itf*', "As the father lives . . ." The signs are brightly coloured and outlined in black. The fragment of a doorpost of the scribe *T;-ipi* (?) (21/384, Pl. X, fig. 5), found in this room, must have been brought thither from elsewhere.

<sup>1</sup> This perhaps belonged to a house now destroyed.

<sup>2</sup> This word appears to be unknown. Possibly "groom" or similar. The *q* of *tpi* "chief" has been purposely erased both here and in the painted inscription from the niche in the North Loggia.

In the loggia itself two circular limestone column-bases are still in position, and it is probable that two more have been removed from between these, so that the roof was originally upheld by four columns, doubtless of wood. In the outer wall there was, to judge by the evidence of other houses (see below, p. 20), a long low window. At the west end were two small rooms opening off the loggia, but reduced by the proximity of the street wall to mere closets. In the centre of the south wall is the great doorway, 2·45 m. broad, which leads into the Central Hall. The threshold is of limestone, and in its centre is still visible the outline of a rectangular centre-post, dividing the doorway into two halves fitted with separate doors. In the wall of the loggia, one on each side of the doorway, and at 2·40 m. from it, are two of the shallow niches which are such a strange yet invariable feature of the el-'Amarneh houses. The niches are here coloured red, with, in one corner, a trace of yellow over it. On the wall, on each side of the two niches, is a vertical inscription in coloured hieroglyphs on a yellow ground, giving the name and titles of Ra'nûfer (just visible in Pl. VIII, fig. 5). The inscription round the west niche is, as Mr. Newton's colour sketch, Pl. IX, fig. 3, shows, well preserved, except at the top. At some period it has been intentionally smudged. The four columns read as follows (see Fig. 2 for doubtful readings):—

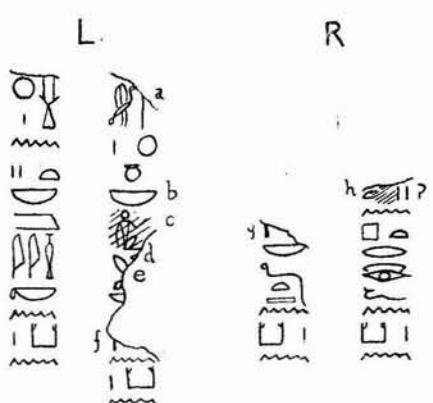


Fig. 2. Upper part of niche inscriptions of Ra'nûfer.

Left side, right column: ". . . I am (read *ink*?) the . . . for the *ka* of the chief *d'k* of his majesty, overseer of the horses of the entire stable, Ra'nûfer, justified."

Left side, left column: ". . . all the time that is (?) as thy approved one, for the *ka* of the chief . . ." etc., as before.

Right side, left column: ". . . all time (read *'h'w*?) for ever for the *ka* of the greatly approved one, the *ka* of the chief . . ." etc., as before.

Right side, right column: ". . . he beholds, for the *ka*," etc.

The east niche was in a much poorer state of preservation, and of the four columns of inscription one can now only discern at the end of each ". . . the approved one of the Lord of the Two Lands, Ra'nûfer."

The Central Hall<sup>1</sup> is peculiar in that it contains only one limestone column-base, and that of very large size (diameter 1·05 m.) and unsymmetrically placed, it being slightly to the west of the centre of the Hall (visible in the photograph, Pl. VII, fig. 1). The countersinking in its base for the wooden column has a diameter of only 42 cm., so that the base itself must have served as a kind of circular seat in addition to supporting the column. In the west wall of the Central Hall are two doorways; the more northerly gives access to a flight of stairs, once shut off by a door, and leading on to the roof, while the other leads to the West Loggia. This last is very small in comparison with the North Loggia, and has obviously undergone considerable modifications at some time. Thus, at its north end, a

<sup>1</sup> For the decoration of this room and of the North Loggia, see below, pp. 43-4.

rather pretentious doorway gives access to what is now a mere dark closet under the stairs. Several indications lead us to suspect that this was not the original arrangement, and that the rectangular space in which the stairs now stand was once a room. Almost more puzzling is the south-west corner of this loggia. Here, in the west wall, is a door leading out into the useless triangular space between the house wall and the street wall. But this is not the worst. This doorway has an older threshold at a lower level, perhaps that represented in various parts of the house, and known to us as the "43 cm. level."<sup>1</sup> But the passage through the door at this level is blocked by what look like the remains of the wall of a circular granary, which must be older than the loggia wall and its doorway, since its lower courses pass right underneath them. There is no difficulty in understanding that this part of the house was built over remains of earlier granaries which the new builders did not trouble to destroy completely; but why they should have made a doorway and yet have left it partially obstructed by an earlier wall passes comprehension.

The remainder of the house consists of a series of small rooms reached from the Central Hall, and in part damaged by water. Along the south side, for instance, are the remains of what the German excavators have called the Square Room, with two rooms opening off at either end of it. We found no trace of the usual bathroom, though in a house of this size it can hardly have been lacking. Nor did we find the lustration-slab which is generally present in the Central Hall; doubtless the stone has been carried away for building purposes.

East of the house lay the well and granaries, Pl. VII, figs. 2 and 5. Here considerable modifications of the original arrangement have been made. Thus two of the granaries have been cut down level with the ground, filled up with rubbish,<sup>2</sup> and built over with poor walls. The well, too, must have been filled up and built over, for we found traces of a long room with three columns covering its southern half, one of the column-bases actually overlapping its edge, Pl. VII, fig. 5.

The granaries, Pl. VII, fig. 2, had been six in number, irregularly placed, but all of much the same size. Their diameter was 2·50 metres, and they were sunk 1 metre into the ground, the inside surface being carefully plastered with mud. It is impossible to guess their original height above the ground, for they are much denuded and no signs of the dome remain. In four cases there were traces of an opening 50 cm. in width at the level of the ground.

The upper part of the well was roughly circular, 3·40 m. in diameter. A flight of stone and brick steps with a right-angled turn in the middle led down to a platform at a

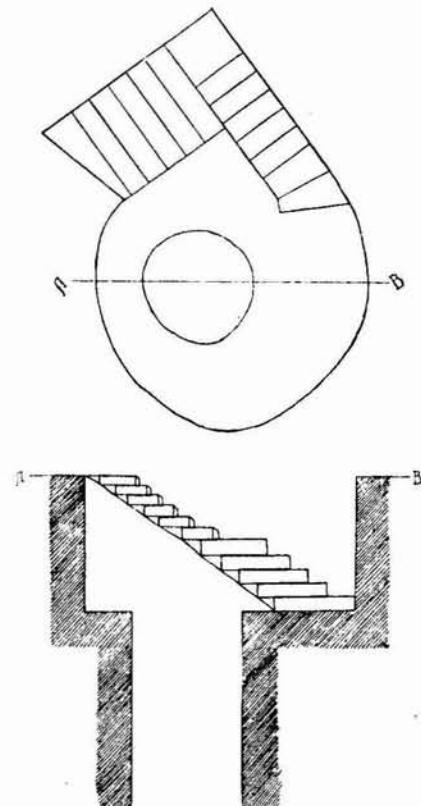


Fig. 3. Plan and section of well:  
House N. 49.18. Scale  $\frac{1}{100}$ .

<sup>1</sup> Further excavation is needed to decide this point.

<sup>2</sup> This rubbish contained mud-sealings probably of Akhenaten, p. 14 and Pl. X, fig. 6.

depth of 1·80 metres. From here a much narrower boring, having a diameter of only 1·50 m., descended for at least another 5 metres (Fig. 3, p. 11). Clearly the pitcher-bearers descended by the steps to the platform half-way down and from there drew up the water with rope and bucket.<sup>1</sup>

It was evident from the first that this house offered, by reason of its various reconstructions, an admirable opportunity for testing a point which we were most anxious to examine, namely, the possibility of there having been a settlement on this site before the time of Akhenaten. On the one side we have the king's own statement<sup>2</sup> on the boundary stelae to the effect that he built his city in a place which "belonged to no god, to no goddess, to no prince, to no princess," which has been interpreted as meaning that the site was uninhabited before the time of Akhenaten; and on the other hand we have the statement of Borchardt<sup>3</sup> that "we may no longer assume that Amenophis IV sought out for the foundation of his town an absolutely 'clean spot,' an area which had never been dwelt in." This last opinion is based on the fact that the German excavators found "at some points in the *wâdi*<sup>4</sup> traces of earlier building under the stratum of Amenophis IV's time." The traces were slight and no means were found of accurately dating them.

It was therefore of the utmost importance to try to determine the life-history of House N. 49.18 by excavating beneath its floors. For this purpose two areas were marked out, one in the centre of the North Loggia, clearly seen in the plan Pl. I, and the other in the east half of the Central Hall, where it was possible to go down without damage to existing walls. In the loggia excavation the following section was obtained, the level of the final brick-flooring of Ra'nûfer's house being taken as zero, and the depths noted in centimetres below it (see Pl. VIII, fig. 7):—

0—10 Brick floor (A).	100—102 Clean sand.
10—14 Clean sand.	102—104 Mud floor (D. 2, immediately below d in photograph).
14—43 Made earth containing broken brick and pot-shards.	104—107 Clean sand.
43—44 Floor of mud (B).	107—112 Thick mud floor (E).
44—55 Clean sand.	112—114 Clean sand.
55—92 Rubbish, mostly broken brick.	114—118 Mud floor (F).
92—94 Floor (C) of mud containing chopped straw.	118—138 Rubbish containing broken brick and pot-shards.
94—96 Clean sand and small pebbles.	
96—100 Mud floor (D. 1), without straw.	138 Virgin sand.

This remarkable section was taken 1 metre south of the centre of the north wall of the loggia. Further towards the centre of the room the strata had been in parts considerably disturbed, and only Floors A, B and E cover the whole area of the excavation. The earliest floor that can be brought into connection with the walls in this part of the house as they now stand is Floor C, all the lower floors having been cut through in laying the foundations of the north wall of the loggia, whereas the plaster of C was taken right up to the wall and rounded off against it. Floor B, however, is of greater importance, for it fixes the

<sup>1</sup> See, however, below, p. 48, on this point.

<sup>2</sup> DAVIES, V., p. 29.

<sup>3</sup> M.D.O.G., 50, 9.

<sup>4</sup> The now dry watercourse referred to above, p. 2, which cut the site in two and destroyed a large number of its houses.

"43 cm. level," which is marked by the lower and earlier thresholds of the two doorways leading from the North Loggia into the two small chambers to the west,<sup>1</sup> and possibly also by the earlier threshold in the south door of the West Loggia referred to above.

The excavation in the Central Hall was almost equally fruitful (Pl. VII, fig. 1). Here, in the exact centre of the room, we exposed the section :—

0—8	Brick floor at same level as A in North Loggia (Floor A).	55—70	Rubbish containing pottery.
8—20	Clean sand.	78—85	Brick floor (Y), very unevenly laid.
20—55	Rubbish with limestone chips and pottery.	85—90	Rubbish and sand.
55	Top of remains of earlier house walls still two to three courses high.	90—92	Thin mud floor (Z).
		92	Virgin sand.

In addition to floors, remains of two walls were also found, one running from east to west, and the other from north to south, together with two limestone column-bases, one of which is probably in its original position. The earliest floor connected with these walls was the mud floor Z, which, however, is not found south of the east-and-west wall. The brick floor Y dates from the main period of occupation of the house to which the early walls belonged, for on it rest the column-bases. It seems to have no counterpart in the North Loggia.

It will easily be understood that these sections with their various walls and floors present a very intricate and interesting architectural problem, which can be followed out in all its details only when more of the floor area has been opened up, as it eventually must be. Our main object, however, was to ascertain whether any of the earlier walls and floors could be definitely assigned to a date earlier than Akhenaten. With this end in view the floors in the North Loggia, once their succession had been ascertained by section, were slowly worked off by hand, one by one, the objects from between each pair of floors being very carefully separated. The result, when these came to be examined, was unfortunately negative: the finds consisted entirely of rough and mostly very small potsherds. Those which came from under Floor E were quite indistinguishable from those found under Floor A, and not a single piece of distinctive pottery was found at any level. A hieratic ostracon from a wine jar, found under Floor A, was complete except for a piece bearing the date, which we were unable to recover despite careful search.

This result, though negative, is not without significance. In the first place we have the fact that the pottery from the lowest floor is indistinguishable from that found beneath the uppermost, or indeed from any handful of sherds picked up on the site. Now although no Egyptologist would be unwise enough to claim that he could distinguish a boxful of rough sherds of Amenophis III from a similar boxful of the date of Akhenaten, unless by good fortune certain distinctive types happened to be present, yet we are prepared to say that the sherds from the lowest stratum cannot differ by very many years from those found in the upper, so close is the resemblance. At any rate these earlier sherds have none of the features typical of the pottery of the Middle Kingdom.

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<sup>1</sup> In Pl. VIII, fig. 5, which shows this doorway from the west, the later threshold of stone is clearly visible. The earlier, of brick, may be faintly discerned below it.

In the second place, our section illustrates a fact well known, but often curiously forgotten, that the depth of an archaeological stratum is no test of the time which it took in accumulating. Here we have strata 138 cm. in thickness, containing seven successive floors. These may perfectly well all date from within the reign of Akhenaten, for the space between each pair of floors consists not of natural deposit but of made earth, placed there in order to raise the level. The shallower strata represent merely the replastering of floors (a mud floor easily wears out in twelve months), a little clean sand being first strewn over the old floor to level any unevenness. A thick stratum may represent merely an attempt to raise the floor-level in some part or parts of the house, or it may represent a reconstruction of the wall system. Thus in the Central Hall Floors A and Y belong to separate wall systems, while in the North Loggia Floors A and B, though 43 cm. apart, belong to the same wall system, as an examination of the thresholds demonstrates.

In the southern portion of the house very considerable remains of earlier floors and walls were found. The floor-level is apparently that marked by the 43 cm. threshold in the North Loggia. The walls connected with this floor were not completely destroyed in the modification, for they often stand a course or two high, running beneath the later walls. In the plan, Pl. I, the earlier walls are indicated by hatching.

Thus the floor-evidence of House N. 49.18 does not prove that any building stood on this spot at the moment when Akhenaten founded his new city. Indeed we are inclined to believe that none of the floors are earlier than that moment, though we do not claim to have furnished definite proof of this. At any rate, it will be necessary to accept with extreme caution Borchardt's statement with regard to the existence in the *wâdî* of buildings of earlier date than Akhenaten.<sup>1</sup> The mere finding of earlier walls beneath those of a house of Akhenaten's date proves nothing, and unless Borchardt can produce from these earlier buildings pottery or other objects definitely datable to an earlier period,<sup>1</sup> he is not in a position to challenge the king's own claim to have founded his city in a "clean place."

*Objects*: Sculptor's trial-piece in limestone, 33 by 24 cm. Found wedged into the small space between the east wall of the courtyard of N. 49.18 and the slighter west wall of N. 49.34. On the one side is a head of the Akhenaten type, on the other a smaller head and two male figures in much rougher style. Pl. XII, figs. 6 and 8, 21/488.

Inscribed limestone door-jamb, 21/384. Hieroglyphs incised and originally coloured: ". . . for the *ka* of the scribe *T-i-pi (?)*." Pl. X, fig. 5.

Fragments of mud sealings impressed with scarabs, found in the two northern granaries, 21/455 and 479, Pl. X, fig. 6. Two show imprints of a beautiful scarab which represented the king and queen seated opposite to one another beneath a disk; in another ☽ and ☾ are clear, and a third sign looks like part of ☽, in which case the scarab probably held a crowded cartouche of Tut'ankhamûn. In a fourth we see the disk with uraeus, the ☽, and another blurred sign.

Fayence tile, with a lotus in pale violet on white (P. XIX. 458), 21/421: clay mould,

<sup>1</sup> M.D.O.G., 50, p. 9: "Allerdings fanden sich keine Anzeichen die eine genauere Datierung der Reste ermöglichen."

21/333 : alabaster dish (cf. Pl. LIV, 21/A), 21/276 : fragment of blue fayence ring-bezel of Amenhotep III, 21/462 : fragment of sealing on mud vase-cap, probably of type P. XXI. 8, 21/464 : bronze or copper mushroom-shaped rivet, 21/463 : false beard in copper or bronze, length 69 mm., 21/419 : worked flint flake, 21/329 : bone borer, leaf-shaped, Pl. XIV, fig. 1, 21/328 : pieces of sandal, 21/327 : potsherd with crude painting of a donkey, 21/245 : part of red terracotta figurine of female, 21/246 : corner-stone amulet in dark blue glass, Pl. XIII, fig. 2, third row, r., 21/243 : part of blue fayence ring-bezel with cartouche of Akhenaten, 21/244.

In Street A, immediately west of this house, large numbers of pottery moulds (Pl. XIII, fig. 3), pieces of rod-glass, imperfect glass beads, etc., were found, and it is clear that one of the buildings in this neighbourhood was engaged in the manufacture of glass. In the same street some distance farther north was found the fine copper or bronze axe-head similar to that in Pl. X, fig. 2, 21/115. From this same area came a figure in limestone of a seated monkey nursing a smaller monkey, Pl. XIV, fig. 3, top, r., 21/278 : two fragments of fayence tiles, with lotus design, Pl. XI, fig. 5, 21/250 : *hes*-vase amulet in blue fayence, Pl. XIII, fig. 2, third row, l. In the garden of a house west of Street A, not excavated, we found lying a piece of a Mycenaean stirrup-vase, 21/284.

*Pottery* : xxix/1010 B, XII/1023, 1032 B, IV/1047.

Such are the two finest houses excavated in 1921 and 1922. As an example of a medium-sized house we may take O. 49.23, which, though standing in its own grounds, is much smaller than the two last and has but a single loggia.

*House O. 49.23 (excavated 1921). Pl. I.*

The enclosure is roughly rectangular in form. On the north, east and west sides the wall is well preserved, but on the south the wall separating this garden from that of N. 49.10, which was only one brick in thickness, has largely disappeared. The enclosure is entered from Street A by an imposing gateway, but not enough remains of the solidly based side-posts to enable us to determine its form. We can, however, fix the minimum height of the wall on the street side, for its northern half has toppled over in antiquity into the garden, where it still lies, covering the ground between the street and the summer-house. Twenty-six, possibly twenty-seven, courses of brick still lie connected on the ground, and, as three are still standing in position, the original height of the wall was at least twenty-nine courses, or, reckoning 11·5 cm. per course including mortar, 3·33 metres. A similar fall of the north wall in the same corner of the enclosure shows an original minimum of twenty-seven courses, and it is not improbable that the height was the same as that of the west wall. These heights ensured complete privacy in the garden.

The house itself stood in the eastern half of the enclosure. In plan it differed from the houses of the great nobles in having only one loggia, that on the north being absent. As against this, however, there was a tendency to enlarge the domestic quarters on the south.

The entrance was on the west, exactly opposite the garden gate. It led through a small square anteroom into the West Loggia. South of the loggia is a narrow room now

separated from it by a wall only two courses high. This wall was perhaps originally intact, the narrow room being accessible by a doorway from the outhouses to the south.

The Central Hall is of the usual type, with a divan against its south wall. It has five doorways. That on the west leads into the West Loggia, those on the east into two small rooms of uncertain use, those on the north into another similar room and to the staircase (see below). Of the two doorways to the south one gave access to a corridor from which opened off two domestic rooms, while the more westerly led direct into an interesting room with an L-shaped divan in the north-west corner. This must be a simple example of the inner reception-room (Square Room), which is found in its most developed form in the house of Nakht, but it is most unusual to find it in a house which does not contain two loggias. Two small compartments open off this room to the south. Returning to the corridor and the two rooms into which it leads, that to the west has the recess which is generally supposed to have held the bed of the master of the house (see below, p. 45); the other is blocked by a cross wall at a metre from its south end, but examination showed that this was not an original feature.

The staircase shows some unusual points. It is fitted into a small room opening off the Central Hall to the north, and supported mainly by a solid pedestal of brick in the centre of the room. In the north and south faces of this pedestal the tenth course of brick from the floor is replaced by one of wood. The height of these courses from the ground is 87·5 cm., and they must have served for the attachment of other structures of wood, but of what nature it is difficult to see. The first three steps of the staircase led up to the north along the west side of the pedestal; the stairs then turned to the east, and were supported by logs of wood set in a brick foundation below and presumably resting above on the east wall of the room, or on a wooden stage built up against this. The sockets of these beams in the brick foundation were still visible (*cf.* Pl. VI, fig. 5), as well as the imprint made by the most southerly of them in the plaster of the north face of the pedestal. A few fragments of the logs themselves were also found among the rubbish in the room; they were billets of roughly 10 cm. diameter.<sup>1</sup> For a reconstruction see Fig. 4 on p. 24.

The outbuildings of this house fall into two groups, lying respectively to the north and the south of it. Those to the north are badly ruined, and were only of interest in so far as they were built over an old rubbish pit. This fact suggested the possibility of discovering evidence of earlier occupation of the site, and the place was therefore excavated with extreme care and sections prepared. The pit, which underlay the brick floor of the large square room and also part of its east wall, was 110 cm. deep, and contained charcoal, potsherds and other rubbish. This was carefully sifted and yielded only a bronze ring with the cartouche of Amenhotp III. Thus no conclusions of any value can be drawn from the excavation; the probability is that the rubbish pit belongs to the earlier days of the house, and that the outhouses built over it are a later addition to the scheme.

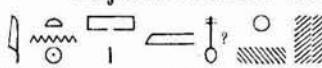
The outbuildings to the south of the house were also much destroyed. Among them was the structure shown in Pl. VIII, fig. 2, which is undoubtedly a miniature granary. It contained ashes and grains of wheat. The summit of its gable roof was 80 cm. from its

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<sup>1</sup> These were almost the only pieces of wood found in the main town site, where the white ant has devoured almost everything.

floor. North-west of this was a long narrow store-pit, 130 cm. deep, also containing ashes and wheat (see below, p. 49).

In the north-west corner of the garden stood the usual summer-house, entered by a ramp from the east. In the southern half of the garden was the well, which would not have repaid the immense labour and cost of excavation. Between the house and the back wall of the garden was a narrow passage by which the southern outbuildings communicated with the northern. At the south end of this passage was a cooking-place of the usual type.

Objects found : Stamp on amphora handle, in the form of an oval ring, containing the words , 21/140<sup>1</sup>: fragment of a cuneiform tablet, Pl. X, fig. 7, found in the corridor south of the Central Hall, 21/98: blue fayence amulet of frog (P. xvii. 328-9), Pl. X, fig. 3, top, l. of centre, 21/111: spindle-whorl of mud, 21/87: fragment of a limestone stela, Pl. X, fig. 1, showing the king making offerings to the Aten, 21/65: three needles of fish bone, Pl. XIII, fig. 1, 21/188: fragment of fayence with cartouche of Amenhotp III in dark on light blue, 21/492: blue fayence pendant head of Hathor (P. xvii. 280), 21/515: fragment of blue fayence scarab with cartouche of Akhenaten, 21/514: fragment of blue fayence ring-bezel with cartouche of Akhenaten, 21/513: fragments of leather and thongs, 21/495 and 499: two left sandals, one for a child, 21/483, 486 and 494: ram's(?) head in limestone, 21/487.

#### BRIEF DETAILED NOTES ON THE HOUSES OF THE MAIN CITY SITE.

##### K. 51.1. (1922, Pl. III.)

Very much ruined, many of the walls dug away by *sebbâkhîn*. In the west jamb of the entrance door, at floor level, a pot containing the body of an infant: this was contemporary with the building and looks very much like a foundation-deposit. In Central Hall, the column-base, hearth and two low divans well preserved: also the staircase with round-topped brick balustrade (Pl. V, fig. 1). West of the Central Hall an inner reception-room (?) with central column and mud hearth.

*Objects* : Bronze Isis plaque, Pl. X, fig. 2, 22/502: bronze needle, 22/504: blue glaze bezel, B. 42: blue glaze amulet, Isis disk and horns: fragment of blue glaze grape-cluster vase; mud ball, 22/503.

*Pottery* : XVI/25 and LXXXVI/264 (child's burial-pot), XL/258, IV/201, VI/1, XI/227, XXV/173, XXV/184, fragments of a large painted pot, and a sherd with a roughly incised pot-mark.

With the infant's bones, a few beads of blue glass and carnelian and one of black-and-white paste.

##### K. 51.2. (1922, Pl. III.)

Properly speaking, this house, like K. 51.3 and K. 51.4, is a *dépendance* of the big house K. 51.1, within whose boundary wall it lies. It is a flimsily constructed and much ruined example of the normal small house.

<sup>1</sup> The only one found in 1921. The type is not among the many discovered in 1922.

## K. 51.4. (1922, Pl. III.)

Badly built and much ruined. Normal middle-class type, but with large outer courtyard or workroom.

*Objects*: Clay moulds, M. 11 and 12: Bes amulet, A. 15<sup>1</sup>: fragment of limestone carving of monkeys, 22/510.

*Pottery*: Painted pot (fragments), type xxiii/1039, xlvi/47.

## K. 51.3. (1922, Pl. III.)

Thin walls, very much ruined. Traces of red paint in niches of loggia. Lower stairs (destroyed) ran over solid packing of shingle. Courtyard with two circular granaries.

*Objects*: Limestone door-handle, 22/511: two Bes amulets, A. 13, 14.

## L. 51.1. (1922, Pl. III.)

Large house, well preserved, walls standing to 1·80 m., but used by squatters after desertion, all stonework removed and rough partitions and bins built in several rooms.

In room 1, remains of painted plaster apparently from window-jambs—stripes of red, blue and yellow: also from a cornice, white, with coloured petal-pattern below. Room 4 had originally 4 columns down centre. Room 8, in north corner, place for water-jar: wall and floor thickly coated with white plaster (on wall to height of 1·70 m.), which also projected to form recess. Stairs (9) returned over 10 (holes for supporting timbers visible), and give height of about 3·60 m. for adjacent rooms. In 11 a brick-lined cist 0·75 m. deep. 16 is probably a lady's bathroom; walls whitewashed. 17 (originally entered from 15), master's lavatory: walls whitewashed: on a raised platform two parallel lines of brickwork with a sloped trough between them form supports for a (wooden?) seat. 18, master's bathroom: walls whitewashed above; platform raised 0·25 m. for stone bath (missing), having at side steps and a standing-place for the servant pouring water over the bather: in the floor in front of platform a circular depression for the big water-jar: floor, steps, platform and lower parts of walls all lime-plastered. 19, master's bedroom. In the west courtyard remains of an oven and of a small shed wherein a rough trough 1·60 m. by 0·90 m. lined with potsherds (perhaps an animal's feeding-trough?). Outside the house to the south was found a (broken) limestone offering-table with 5 circular depressions and very short legs.

*Objects*: Blue glaze Bes amulet, A. 12.

## M. 50.13. (1922, Pl. I.)

Poorly built example of normal middle-class type: not raised, therefore entrance by passage, not ramp. The loggia (2) and the small room 3 may have been used as workrooms, as several clay moulds were found there: the brick compartments in 3 show no signs of burning and were probably small bins. Room 4, remains of divan against north-west wall: against north-east wall, stone offering-table 0·73 m. by 0·59 m. and 0·36 m. high, with five cup-holes (Pl. VI, fig. 2). Entrance thence to 9 was by a doorway of cut stone painted red (Pl. VIII, fig. 3), inside measurements 1·48 m. high by 0·63 m. wide, outer measurements 2·07 m. by 1·35 m.; stone 0·10 m. thick. Rooms 11 and 12 apparently lavatory and

<sup>1</sup> For reference lists of moulds (M), amulets (A) and ring-bezels (B) see pp. 169-71.

bathroom (?). South corner of house wholly destroyed : the apartments to the east belong to another house not fully excavated.

*Objects* : Stone spinning-bowl, 22/591 (from room 4) : stone seat and table and fragment of second table whereon roughly drawn in ink a cartouche of the Aten (early form), a second cartouche (?) and some meaningless lines : clay object, 22/592 : Mycenaean sherd, 22/589 : bronze borer, 22/593 : clay moulds, M. 64, 65, 66, 67, 68, 69, 70, 77, 86, 87.

*Pottery* : xxv/26 (painted, fragments).

#### M. 50.14. (1922, Pl. I.)

Apparently a series of workrooms attached to the dwelling-houses M. 50.15 and 16 : there is no house-plan recognisable on this much-ruined site. At point X, remains of a glaze kiln : pit cut in sand 1·00 m. diam. by 0·50 m. deep, full of burnt brick, glass and glaze slag, and fragments of the pots used in the kiln for standing the glazed vessels on : the bottoms and sides of these are covered with tricklings of glaze.

*Objects* : Limestone mould, 22/586 : clay mould, M. 78 : two bronze needles and two bronze chisels.

*Pottery* : xxv/232.

#### M. 50.15. (1922, Pl. I.)

Normal type small house, very much ruined, even entrance not recognisable.

*Objects* : Clay moulds, M. 71, 72, 83, 84, 85 : specimens of yellow, light green and blue paint : Bes amulet, A. 51 : mud ball with seal impressions : bronze chisel, 22/597 : fragment of Cypriote potsherd, decoration white on grey-black.

*Pottery* : xxv/197.

#### M. 50.16. (1922, Pl. I.)

Small and poor house, but lying in a hollow and so better preserved. Central walls standing 1·60 m. high : north side much ruined and north wall virtually gone. Entrance probably by north wall into room 1. Room 2 has access by raised door to cupboard under stairs (8) wherein was a round stone table. Room 3 : Divan against west wall : against south wall traces in plaster of where water-jar stood : wall whitewashed : on this remains of painted design, festoons of parallel curves in red, blue, green and black, with transverse black stripes. Against east wall, traces in plaster of low round-topped fire-place (?) or bin). Niche well preserved. Frame red with faint traces of inscription in yellow : ground red whereon yellow panel coming down to floor-level : on panel, between horizontal red lines (at 0·85 m. and 0·91 m. above floor) lotus flowers roughly sketched in red : above this, remains of coloured drawing of two people (man and woman ?) seated on chairs facing left, with another figure standing before them (?) : this design is bounded by red line above (height 1·35 m.), over which more traces of lotus design. Also in room 3 was found a fragment of the mud casing of a post, painted with lotus-petal designs. Room 5 had no door (walls standing 1·20 m. high), and was probably a cellar-bin reached from above only. 9 is an open courtyard containing a box hearth and a pot-lined beehive bread-oven.

*Objects* : Bronze needle, 22/594 : bolt, 22/595.

## N. 49.10. (1921.)

A large house standing in a spacious rectangular enclosure entered by a well built doorway from Street A. The street wall has toppled over almost entire into the garden, and a minimum of twenty-six connected courses can still be counted. The minimum height of the wall was therefore 299 cm. The path from the gate to the house entrance was bordered on the north by a one-brick wall, probably not very high, and the north portion of the garden, which contained the summer-house, was thus shut off from the rest.

The main outbuildings lie along the east wall of the enclosure. In one room still stands an oven shown in the plan, and in the most northerly room is a cooking-place of brick, also indicated. There are two small outhouses in the south-west corner of the garden.

The house itself has some features of interest. It is entered from the west by a ramp leading up to the north under the large window of the West Loggia, which is reached through a small anteroom. The narrow room west of the ramp is unusual; we may be justified in calling it a porter's lodge.

In the West Loggia was found a most valuable piece of evidence bearing on the position and size of its window. A portion of the outer wall of the loggia, consisting of twelve connected courses, has fallen almost intact into the loggia, where it lies over about 60 cm. of rubbish (Pl. VII, fig. 3, from north). It was noticed that the south end of this piece of fallen masonry was not only clean cut, but also whitewashed, and on careful examination it became clear that this end was the north edge of the window opening in the outer wall of the loggia. By careful measurements it was possible to establish the fact that this north edge lay 99 cm. farther north than the north edge of the doorway leading from the West Loggia into the Central Hall. If we suppose that the window was placed symmetrically with regard to the doorway opposite which it stood, which is probable though not certain, we get a total breadth for the window of 3·08 metres, being the breadth of the doorway, 1·10, plus 99 cm. on each side. With regard to the height of the window we can be less definite. The whitewash ran from the fourth to the tenth course of the fallen edge, *i.e.*, seven courses, or 80 cm. in all, and, since there may have been whitewash beyond these limits which has perished, we may take this 80 cm. as a minimum for the height of the window. Still more difficult is it to determine the height of the bottom of the window from the floor. Not only have the remains of the outer wall of the loggia from which the masonry has fallen been heavily denuded since the fall, but the lower courses of the fallen portion are in such complete confusion that it is impossible to count them, or even to estimate their number with any probability. It is thus impossible to tell at what height from the ground the lowest patch of whitewash originally was.

The Central Hall has two doubly recessed niches, shown on the plan. The whole house was well floored with a single layer of bricks.

*Objects:* Yellow fayence bead amulet representing the young Akhenaten with hand to mouth, Pl. XIII, fig. 6, third row, to r. of centre, 21/91: neck of Mycenaean stirrup-vase, 21/33: copper or bronze tweezers, Pl. XIII, fig. 5, top, l., 21/13: blue fayence ring-bezel with *nefer*-sign, Pl. X, fig. 3, 21/17: long bead of violet glass with yellow discs, Pl. X, fig. 3, top, r., 21/3.

## N. 49.11. (1921.)

Built up against the enclosure wall of N. 49.10.

In the Central Hall is a concealed cist in the floor. It is a circular bricked pit, 75 cm. in diameter (Pl. VI, fig. 3), narrowing towards the top, covered with a large limestone slab which is concealed by the 18 cm. of brick and mud flooring. As the pit slightly undercuts the north wall of the Central Hall it would seem to have been made before or during the building of the house. At some period the flooring was removed, the limestone block broken up and the cist rifled. A lapis lazuli scarab mounted in gold, found on the floor of the Hall beside the cist, indicates that here we have to deal with a true treasure chest.

The sockets of the beams supporting the staircase are well preserved, Pl. VI, fig. 5.

*Objects* : Blue fayence amulet of Bes with cymbals (P. xvii. 288), 21/156 : ditto, 21/109 : two blue fayence beads (P. xix. 471 and xviii. 367), 21/145 : blue fayence ring-bezel with *nefer*-sign (P. xvi. 169), 21/136 : blue fayence plaque, with part of name of Aten in cartouche (fragmentary, P. xiv. 74), Pl. XIII, fig. 6, centre, 21/131 : glass earring, Pl. XIII, fig. 6, second row, r., 21/130 : small lapis lazuli scarab set in gold, Pl. XIII, fig. 2, third row, 21/124 : lump of pink organ coral, 21/114 : blue fayence amulet of Bes full face, Pl. X, fig. 3, top, l., 21/108.

## N. 49.12. (1921.)

To the north is a small courtyard entered from the east, from the empty space lying west of the High-Priest Street at this point (see German plan). In the south-west corner of this courtyard is the house door, singly recessed. Two solid side walls 148 cm. long form a porch outside this, but there is no evidence to show whether they were arched over or merely covered with a flat roof. In the Central Hall lustration slab and brazier are well preserved.

*Objects* : Mould for lotus flower, 21/193 : two leather sandal soles, 21/105 : blue fayence scarab, with *nefer*-sign, Pl. X, fig. 3, top row, r. of centre, 21/112 : bone spatula, broken, 21/119 : fragment of fayence tile, leaf and bud in coloured low relief, Pl. XI, fig. 4, centre, 21/149 : clay mould (P. xvi. 218), 21/151 : small sherd of Mycenaean pottery, 21/163 : figure of an ape in coarse limestone, Pl. XIII, fig. 1 (turned sideways), 21/187 : mauve fayence Horus-eye with *ankh*-sign on back, Pl. XIII, fig. 2, second row, l.

*Pottery* : XIII/1001 b, XIII/1001 d.

## N. 49.13. (1921.)

This house stands at a high level, and is apparently entered by a long ramp leading up from the south. The inhabitants seem to have at some period taken over as a kitchen the long narrow room running west from the ramp and lying between N. 49.24 and 25. Originally open at its west end, the passage was blocked by the building of N. 49.39, and a fine oven was erected at this end.

*Objects* : Blue fayence ring-bezel (P. xvi. 213), Pl. XI, fig. 3, top, l., 21/171 : female head in pottery, 21/204 : blue fayence pendant (P. xix. 443), Pl. XIII, fig. 2, fourth row, r., 21/205 : blue fayence amulet of the young Akhenaten (P. xvii. 272-4), Pl. XIII, fig. 2, top, l., 21/206 : small ingot of lead, Pl. XIII, fig. 4, semi-cylindrical in form, length 95 mm., 21/214 :

ram's head carved in limestone, thickly coated with red and yellow pigment, flat base, 21/216 : blue glaze amulet of Bes, Pl. XIII, fig. 2, top, r., 21/217 : three copper or bronze rivets, mushroom-shaped, Pl. XIII, fig. 4, 21/218 : blue fayence ring with cartouche of Amenhotp III, Pl. XI, fig. 3, l. centre, 21/219 : blue glaze amulet of Bes with cymbals (P. xvii. 288), 21/221 : clay mould for ring (P. xvi. 235), 21/222 : large fluted spherical bead of dark blue fayence, 21/226 : blue glaze fly amulet, 21/227 : blue fayence thistle bead, 21/229 : copper or bronze spatula, 21/231 : ivory button, segment of sphere, 21/448.

*Pottery* : xxxix/1011.

N. 49.14. (1921.)

This and N. 49.31 are built up within a single set of outer walls, with which neither the party wall nor any of the inner walls are bonded. It is possible therefore that an older house of moderate size has here been made into two small houses. The building is very poor, and the house represents the reduction to a minimum of the elements of an Akhetaten dwelling, namely, entrance passage, Central Hall, bedroom, kitchen and staircase.

*Objects* : Inscribed door jamb in limestone, signs incised and originally coloured, Pl. X, fig. 4, height 54 cm. "The giving of praise to the living Disk, kissing the earth to the Lord of Eternity. May he grant an entrance (or May he grant bread ?) . . ." 21/248 : green glaze amulet of leg of ox (P. xvii. 309), Pl. XIII, fig. 2, third row, l., 21/241 : blue glaze ring-bezel of sacred eye, 21/234 : earring of clear green glass, 21/232 : statuette of nude female in reddish terra-cotta, 21/196 : copper or bronze needles, 21/179 and 239 : blue fayence pendant representing bunch of grapes (P. xix. 448), 21/180.

*Pottery* : 1003 E, 1006 B ; 1013 A ; XLIII/1015 B ; 1017 B, 1021 A, VI/1032, VII/1038.

N. 49.15. (1921.)

Seems to have been almost completely masked by the erection of later and poorer houses. Entered from the east through a double courtyard lying east of N. 49.21. The single loggia, to the north, still has two column bases in position and probably had originally three columns. The Central Hall has a single central column base and a brazier south-east of it. Also two doubly recessed niches painted red. In the south-east room was a rectangular brick-lined cist concealed beneath the floor.

The staircase leads west for three steps and then turns north over a narrow room entered from the loggia and serving as a cupboard.

The north wall of the house, which by its lowness betrays the previous existence of the usual window in the loggia, is completely masked by the building of N. 49.21. Round the other three sides of the house runs a passage, broadest on the south side. Here a wall, probably later, divides it into two. In the west half stands an oven and in the east half two. East of the house is a small hearth.

*Objects* : Heavy limestone pot-stand in south-east corner of loggia : mould for thistle bead, 21/223, and another for earring, 21/413, and finger ring, 21/412 : blue glaze beads (P. xix. 504), 21/240 ; (P. xix. 496), Pl. XIII, fig. 2, fourth row, r. of centre, 21/176 ; (P. xix. 445), Pl. XIII, fig. 2, fourth row, l. of centre, 21/185 and 195 ; (P. xix. 471), 21/237 : two blue fayence sacred eye amulets, Pl. XIII, fig. 2, second row, centre and r., 21/235 : three amulets, Bes with cymbals in blue fayence, 21/177, 233 and 209 : mud plummet, 21/225 : limestone earring, Pl. XI, fig. 5, l., 21/178 : yellow glass earring, Pl. XIII,

fig. 6, top, centre, 21/213 : copper or bronze arrowhead, Pl. XIII, fig. 4, 21/212 : fragments of fayence tiles, Pl. XI, fig. 4, top, 21/211 : fragment of blue fayence ring-bezel, cartouche of Akhenaten, 21/437 : fish-hook in copper or bronze, 21/436 : sandstone mould for two ring-shaped objects, 21/472 : blue glaze ring-bezel with sacred eye and two *nefer*-signs, 21/461 : blue fayence amulet, Bes with cymbals, 21/460 : fragment of blue fayence ring-bezel with cartouche of Tut'ankhamûn, 21/443 : blue glaze drop pendant (P. xx. 549), 21/441 : disk of bone, stained orange and pierced in centre, diameter 28 mm., 21/430 : clay mould for leaf (P. xx. 522), 21/429 : blue fayence ring-bezel of 'Ankhkheperuré', 21/418 : leather hafting for an axe, 21/417 : saw flint, Pl. XIII, fig. 1, l., 21/416 : ring bead of yellow fayence, Pl. XIII, fig. 2, bottom, r., 21/224.

*Pottery* : 1002 F, 1004 B, 1006 A, XXXIX/1011 B, 1016 C, I/1019 H, III/1020, XI/1021, XXII/1043.

#### N. 49.16. (1921.)

Lightly built out into Street A on to the west wall of the enclosure of O. 49.23. In the more southerly of the two rooms east of the Central Hall are two sunk store-jars in the floor, one of which is heavily coated with mud.

*Objects* : Clay mould for ring (P. XVI. 238), 21/203 : copper or bronze spearhead, Pl. XIV, fig. 1, bottom, 21/202.

*Pottery* : VI/1004 A.

#### N. 49.17. (1921.)

Poor house standing in the bend of Street A. Level irregular, falling considerably from north-east to south-west. Embedded in east wall of Central Hall is a length of earlier walling with slightly different orientation.

*Objects* : None.

#### N. 49.19. (1921.)

Unimportant. The front portion of the divan in the Central Hall was either built or repaired with stone slabs, of which one has seven circular depressions in its surface.

*Objects* : White marble vase lid, 21/519 : clay mould for trefoil, 21/465 : limestone mould for disk and horns, 21/518 : copper or bronze signet ring, cartouche of Amenhotp III, Pl. XI, fig. 5, r., 21/485 : blue fayence bead (P. XIX. 462), 21/482 : mud ball containing hair, 21/481 : blue fayence ring-bezel, cartouche of Akhenaten, 21/466 : blue fayence ring-bezel (P. XV. 127), 21/459, Pl. XI, fig. 3, bottom, r. : blue fayence ring-bezel of Sakeré, 21/454 : copper or bronze tweezers, 21/452 : copper or bronze needle, 21/438 : cartouche of Nefertiti incised on plaster, 21/449 : blue fayence drop-bead of a thistle (P. XIX. 496), 21/444 : blue fayence cowroid with *nefer*-sign, 21/442 : *dad*-amulet in blue fayence, 21/439.

*Pottery* : IV/1002 L, 1015 C, VIII/1040, 1002 N, 1002 O.

#### N. 49.20. (1921.)

Shows signs of considerable reconstruction, and now appears to have no entrance. The sockets which received the bottom ends of the three beams supporting the staircase are clearly visible from behind in the solid block of masonry which supports the first three steps. What is more, immediately above these holes is the imprint in the mud mortar of

a plank laid across the beams. This plank was a re-used piece of wood, for it was coloured, as the traces left in the mortar show. This is the only instance in which any evidence

was obtained as to how the brick steps were supported on the three beams without breaking through the gaps between them. It is clear that in this case the beams were overlaid crossways by short pieces of plank (Fig. 4).

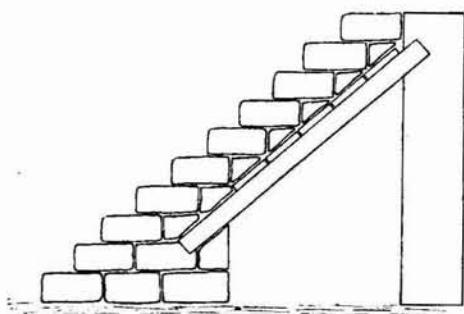


Fig. 4. Section of staircase: House N. 49.18. Scale  $\frac{1}{20}$ .

that the group of glass bottles and lead objects was found buried in the floor (see below).

*Objects:* Three clay moulds, 21/456, 457 and 467: limestone spindle-whorl, 21/447: clay figurine of Bes, painted red, 21/446: copper or bronze needle, 21/445: hemispherical button-beads of cream fayence, 21/433: seven fragments of a fayence lotus-flower modelled in the round, 21/470: piece of malachite, 21/469: ivory bead-threader with ten holes, 21/471: leaf-shaped arrowhead in opaque blue glass, Pl. XI, fig. 5, bottom, l., 21/480.

Objects found in a room east of N. 49.20, at the point marked with an asterisk in the plan, Pl. I, at the south edge of the room, under a double plaster floor: two bottles of blue, yellow and white glass in ripple pattern, Pl. XII, fig. 7, 21/473 and 474: glass bottle in form of a fish (genus *Tilapia*), in light blue, dark blue, yellow and white ripple glass, Pl. XII, fig. 3, 21/475: three vases, probably of lead, found along with the glass bottles, Fig. 5, in poor condition, 21/476, 477 and 478; the L-shaped vase is open at both ends of the L, but it is difficult to imagine what was its use.

*Pottery:* 1003 D, xv/1046.

#### N. 49.21. (1921.)

In the west wall of the Central Hall a niche with vertical panels red, yellow, red. Later, this corner of the room was enclosed by an angle of wall forming a small enclosure, on to the top of which appears to lead a small staircase of four steps set against the west wall of the room and running south. The whole has more the appearance of a little shrine<sup>1</sup> than of a structural staircase. The ordinary staircase of the house lies east of the Hall. A shapeless wall of mortared brick and rubbish, clearly late, crosses the Hall from east to west.

*Objects:* Yellow fayence cornflower pendant (P. xix. 471), 21/450: blue fayence amulet of Bes with cymbals, 21/435.



Fig. 5. Vases of metal: N. 49.20.  
Scale  $\frac{1}{3}$ .

<sup>1</sup> Compare perhaps P. 47, 22 (*M.D.O.G.*, 55, pp. 14-16 and Abb. 4 on p. 15).

The following group of objects was found together in the small cupboard beneath the stairs, above a stratum of black sooty sand: stela of limestone, Pl. XII, fig. 2, showing in paint a woman and a girl adoring Taurt; colours red, yellow and black, height 118 mm., 21/424: terracotta figurine of nude female, Pl. XII, fig. 4, with wig and conical head dress; breasts prominently marked, feet lost; height 130 mm., 21/427: two model beds of pottery, Pl. XII, fig. 5, with a white slip and red stripes, length about 160 mm., 21/425 and 426.

*Pottery*: 1002 H, 1002 K, 1/1019 G, 1032 A.

#### N. 49.22. (1921.)

Poor house, with walls one brick in thickness. Not yet fully excavated.

*Objects*: Scarab in blue fayence bearing griffin, 21/9.

#### N. 49.24. (1921.)

Almost completely destroyed. The north-west corner, where the entrance probably lay, has been broken away, doubtless by the building of the circular structure numbered N. 49.40.

*Objects*: None.

#### N. 49.25. (1921.)

Little to record. The staircase was inserted in a long narrow room north of the Central Hall. A rough hole cut in the wall gave access to a cupboard under the stairs. The three sockets in which were inserted the beams supporting the stairs are still visible.

*Objects*: None.

#### N. 49.31. (1921.)

Poor house, built within the same outer walls as N. 49.14 (*q.v.*). In the Central Hall are two successive mud-brick floors separated by a thin layer of sand.

*Objects*: None.

#### N. 49.32. (1921.)

Shapeless house, built up in the space between 19 and 20. The sockets for the stair-beams are clear. The beams, which went up at an angle of about 35 degrees, were clearly very irregular in shape and twisted.

*Objects*: None.

#### N. 49.33. (1921.)

Formed by fitting unbonded internal walls into the space between the west wall of 19 and the east wall of the enclosure of 18.

*Objects*: Clay bobbin, 21/507: four clay moulds, 21/483, 484, 504 and 505: bone borer, 21/508: piece of beeswax, 21/506.

## N. 49.34. (1921.)

Built entirely of one-brick walls, even on the north side, where alone it does not abut on other buildings.

*Objects* : Pieces of limestone lintel with cartouches of the Disk, 21/489.

## N. 49.35. (1921.)

One-brick walls throughout, except east and west walls of Central Hall.

*Objects* : Clay moulds, 21/511 and 415 : mud ball containing hair, 21/500 : fragment of Mycenaean pottery, 21/496 : blue fayence ring-bezel (P. xv. 122), Pl. XIII, fig. 6, second row, l., 21/420.

## N. 49.36. (1921.)

Well built house with no unusual features.

*Objects* : Clay mould, 21/503 : blue glass earring, 21/431 : blue fayence ring-bezel, cartouche of Akhenaten, 21/451 : copper or bronze chisel, 21/432.

## N. 49.37. (1921.)

No details of note.

*Objects* : None.

## N. 49.38. (1922.)

Very small house, badly preserved. Entrance direct into main room, wherein divan and, against east wall, curved brickwork recess (for water-jar ?) ; hole in floor for hearth near south wall ; fragments of large stone bath.

*Objects* : Clay moulds, M. 62, 63, 73, 74, 75, 76, 80, 81, 82 : glaze amulets, A. 49, 50, 53 : glaze ring, B. 52 : 3 bronze needles : small bronze knife : bronze chisel, 22/590 : 2 bone scrapers : flint saw : horn handle for borer (?) : wooden kohl-stick : rectangular alabaster palette, 0·065 m. by 0·043 m., and circular ditto, diam. 0·087 m. : sherd with graffito, 22/587.

*Pottery* : xx/234.

Along the south and east of the house runs a narrow lane ; east of this lies the courtyard of a house not excavated, with pots sunk in three corners.

## N. 49.39. (1922.)

Much ruined : entrance not recognisable, probably from west into north-west room. Central room with divan and (unlined) hearth. Here fragment of mud casing of a slender wooden column, painted with lotus-petals and circles.

*Pottery* : LVI/213.

## N. 49.40. (1921.)

No explanation was found for the two pieces of curved walling to which this number was given. They stand in an angle of Street A formed by the jutting forward to the west

of House N. 49.42. As there are a number of small houses in this neighbourhood it is possible that the curved walls mark the position of a public well. As it would have cost a large amount in time and money to verify this the problem was left unsolved. A trial pit sunk in the middle was still turning out sand containing rubbish at three metres. These walls seem to be later than House N. 49.24, which they have in part destroyed.

#### N. 49.41. (1921.)

Unimportant house built on to the west of 25.

*Objects* : None.

#### N. 49.42. (1921.)

Poor house ; plan only just discernible.

*Objects* : None.

#### N. 50.30. (1921.)

Nothing worthy of record.

*Objects* : Leather binding for securing axe-head to handle, 21/155 : poor blue fayence scarab, Pl. XIII, fig. 2, third row, r. of centre, 21/134 : rough alabaster pot-stand, 21/126 : badly damaged figurine of lead, two holes at top for attachment, 21/125 : blue fayence lotus bead, 21/123 : clay spindle-whorl, 21/117 : earring of dark umber coloured glass, Pl. XIII, fig. 6, top, l., 21/113 : blue fayence seal, semi-cylindrical, with uraeus and disc on base, Pl. X, fig. 3, bottom, l. of centre, 21/110 : fragment of blue fayence plaque with design of a capital of a column, 21/101 : part of blue fayence ring-bezel bearing the word Aten, 21/102 : sculptor's trial piece in limestone, 123 by 82 mm. ; on each side part of a male figure in pleated skirt, Pl. XIV, fig. 3, bottom, r., 21/516 : neck of a statue in hard brown stone of the finest work, Pl. XI, figs. 1 and 2, height 69 mm., diameter at top of neck, 52 mm. ; this may possibly fit some damaged figure previously found on the site, 21/512 : alabaster dish, Pl. LIV, 21/A, 21/509 : copper or bronze borer with part of wooden handle attached, Pl. XIII, fig. 4, 21/502 : three copper or bronze needles, 21/501.

*Pottery* : XXXVIII/1014, XVIII/1045.

#### O. 47. 16, 17, 18. (1922, Pl. III.)

Three small workman's dwellings in a very bad state of repair. The ground here had been dug over by *sebbâkhîn*, who had destroyed most of the walls and floors, and had sifted all the soil ; the site was therefore abandoned as soon as the plans of the houses on which work started were secured.

#### O. 47.16. (1922.)

Floor-level rose from south to north almost to modern surface ; all floors destroyed. Masonry block occupying south-west room possibly a stair-pillar, but more probably a base for some object. Brick-lined semicircular pit in north-east room.

*Objects* : Fragment of fayence tile, 22/516 : fragment of blue fayence grape-cluster : glaze

amulet, A. 22 : flint knife, 22/518 : clay mould, M. 28 : fragment of limestone with remains of inscription : 2 sherds of Mycenaean pottery, 22/517, 22/532.

*Pottery* : IV/127 and 128, VI/126, L/167, LXVIII/121.

#### O. 47.17. (1922.)

Floor rises to present surface at north end ; only living-room and a cupboard (bedroom ?) recognisable.

*Objects* : Glaze amulets, A. 19, 20 : clay mould, M. 29 : fragment of clay figurine of Isis : fragment of gold leaf.

*Pottery* : IV/138.

#### O. 47.18. (1922.)

Central room, stone column-base : in west wall a doorway cut through brickwork, 1·00 m. high by 0·50 m. wide, with rounded top, to small outside yard on south-west : in south wall a window-like opening 0·45 m. above floor-level, which must have served as door to the south-west room. Traces of staircase in north-west corner.

*Objects* : Glaze bezels, B. 45, 46 : clay moulds, M. 34, 35, 36, 37 : fragment of clay figurine of Isis : glaze scaraboid : fragment of flint knife.

#### O. 48.16. (1921.)

An unimportant house, followed to the west by a series of hovels lying along the south side of Street B. They show no features of interest and often stand no more than one course in height.

*Objects* : Limestone spindle-whorl, Pl. XIV, fig. 3, top, centre, 21/18 : part of blue fayence ring-bezel of Tut'ankhamûn, Pl. X, fig. 3, bottom, r. of centre, 21/20 : ditto, with fish design, 21/26 : copper or bronze fish-hook, Pl. XIII, fig. 5, 21/28 : two blue fayence Bes amulets (P. xvii. 287-8), Pl. XIII, fig. 6, third row, l. of centre, 21/46 : clay mould for rosette, 21/52 : cone of blue fayence, pierced axially, 21/53 : blue fayence ring-bezel (P. xv. 126), 21/56 : blue fayence ring with bezel in form of sacred eye, Pl. XI, fig. 3, bottom, l., 21/57 : alabaster spindle-whorl, 21/59 : sacred eye amulet in blue fayence, 21/60 : bronze or copper shears, 21/61 : alabaster pounder, 21/63 : fragment of glazed tile, violet design on cream, 21/68 : hieratic ostracon, 21/69 : hone of grey stone, 21/79, Pl. XIV, fig. 3, left : ring of gold foil, 21/161, Pl. XIII, fig. 1, top, r., with figure of a goat (?), for which compare P. xvi. 187-194 : copper pin, Pl. XIII, fig. 5, next to bottom, 21/12. The majority of the above objects were found in two rubbish pits.

*Pottery* : XXVI/1013.

#### O. 48.17. (1921.)

Set in a large rectangular enclosure with an entrance from Street A on the west. The south wall forms the north boundary of Street B.

The house is of the two loggia type. In the Central Hall is a niche at the east end of the south wall, doubly recessed and painted red with a central panel of yellow. The rebates are red, while the wall on each side of the niche is white. In the West Loggia

there is an earlier brick floor beneath the present one, and separated from it by 9 cm. of sand.

In the south-east room is the recess supposed to have held the master's bed. The one-brick dais in the recess has mostly been removed, revealing a concealed bricked cist 155 by 67 cm. and 50 deep. In this were pieces of resin, 21/35, smooth pebbles, 21/34, and a copper pin, 21/36. The room itself yielded pieces of blue and yellow pigment, 21/14, 21/11.

Behind the house were two large circular bricked pits sunk in the ground. The larger was 170 cm. in diameter and 190 in depth. Both had originally been domed in brick. A smaller bricked pit, oval in shape, lies south of the house.

*Objects* : Blue fayence ring-bezel, lotus design, 21/21 : bone borer, 21/38 : bone polisher, 21/39 : eleven flint flakes, 21/40 : hieratic ostracon, 21/45 : fragment of wooden comb, 21/89 : limestone monkey, 21/534 : model of leg of ox in bronze, Pl. XIII, fig. 5, top, r., 21/16.

#### O. 49.22. (1921.)

This house had no entrance from a main street, but was approached by a narrow passage leading south from Street B behind O. 48.16.

The Central Hall is well preserved ; divans to east and south ; brazier in position in centre, Pl. VI, fig. 6. Two niches, both painted red over a coat of yellow. Lustration-slab and drainage vessel against east wall.

Staircase leads off not from Central Hall but from an intervening room (*cf.* P. 46.8), nor is it against the outer wall of the house. This fact, together with certain indications in the foundations of the outer walls of the three east rooms of the house, suggests that these are a later addition. In the outer wall of the central room of these three is a primitive drain made by fixing in a hole through the wall a tubular pot with the bottom knocked out. A large vase received the outflow and was emptied by hand by means of a small baling dish found in it. Pl. VIII, fig. 6.

Much painted plaster was found in this house, but in very small fragments.

*Objects* : Blue fayence ring with *ankh*-bezel (P. xvi. 167), Pl. XI, fig. 2, r. centre, 21/95 : semicircular seat of limestone on three short feet (Pl. XIV, fig. 8), 21/80 : bone earring, 21/50 : copper or bronze spatula, 21/31 : alabaster vase stopper, 21/30 : leaf-shaped arrowhead of bronze, Pl. XIII, fig. 5, 21/1 : fayence scarab with bird-headed lion, Pl. X, fig. 3, top, centre, 21/9 : blue fayence bead, Pl. X, fig. 3, bottom, r., 21/19 : copper or bronze nail, Pl. XIII, fig. 5, top, 21/27.

*Pottery* : vi/1002, xxxviii/1014 a, viii/1065, xliii/1015, xxv/1016.

#### O. 49.23. (1921.)

See above, p. 15.

#### O. 49.24. (1921.)

House of some importance, standing in south-west corner of a large rectangular enclosure with a well built entrance from Street A. The north wall of this enclosure has disappeared

and its place is taken by a group of hovels with an irregular frontage on Street B. It is not improbable that these are a later addition, and that originally the north enclosure wall of this house formed the south side of Street B. In the south-west corner of the garden are the outbuildings.

The house itself is badly denuded. It is entered from the west side up a ramp, through a more than usually spacious anteroom. In the West Loggia is a roughly made tank of limestone 78 by 53 cm. and 20 in depth, probably not in position. A stone threshold leads to the Central Hall. At each end of this threshold is a slot 18 by 5 cm. for the wooden side posts, at the south end is a pivot hole, and towards the north end a hollow on the Central Hall side scraped by the bottom of the door. The wooden door was thus hinged at the south side and opened into the Central Hall. Its breadth must have been 63 cm.

In the north-east corner of the house is the usual recessed room. From this a bathroom opens off to the south, Pl. VI, fig. 1. The bathing-slab is in the south-west corner of the room and has a runnel to the north leading into a round hole in the ground, into which was originally cemented a large bowl to hold the water, which was then baled out by hand. The original bowl has gone and a rough two-handled jar stands in its place. This is not fed by the runnel, and, from its form, is clearly a store jar, placed here when the bathroom had ceased to be used as such. The small recess east of the bathroom was certainly a lavatory. On the floor, against the north wall, are two bricks, one above the other, on the east side, and one on the west, with a space of 17 cm. between them. In the centre of the floor of the room is a rough hole 55 cm. in diameter (perhaps later).

*Objects*: Fragment of blue fayence ring-bezel with figure of goat (*cf.* P. XVI. 187-89), Pl. XIII, fig. 1, top, l., 21/162: mould of baked clay for a round bead, 21/158: copper or bronze needle, 21/153: mould for fayence ring, 21/152: blue fayence plaque with the cartouches of the Aten, Pl. X, fig. 6, bottom centre, 21/150: conical gaming-piece in lapis paste, 21/144: flint with serrated edge, Pl. XIV, fig. 1, top l., 21/142: blue fayence amulet of Taurt, Pl. XIII, fig. 6, third row, r., 21/141: bronze cutting out knife, Pl. XIII, fig. 5, centre, 21/138: wooden hair-pin with herring-bone decoration incised on it, 21/121: two fragments of fayence tile with green leaves on pale blue ground, Pl. XI, fig. 4, bottom, 21/100: granite pounder, 21/81: grey stone earring, Pl. XIII, fig. 6, top, r., 21/210: blue fayence ring-bezel, cartouche of Tutankhamûn, 21/220: clay ring-bezel, *'nly ntr nfr nb t:wi'*, Pl. XI, fig. 3, top, r., 21/200: rough knives of flint, Pl. XIII, fig. 6, 21/194 and 186: yellow fayence flower bead, Pl. XIII, fig. 2, bottom, l.

*Pottery*: 1016 A, 1017 A, XII/1022, XLII/1009 B.

P. 46.7. (1922. Pl. II for houses from here onward.)

Small poorly built house, much ruined and all west side destroyed. Normal plan.

*Objects*: Bronze ring, 22/541: amulet A. 24: clay mould, M. 38: rude clay figurine, 22/545: Mycenaean sherd, 22/544.

*Pottery*: VI/154 and 221, XIX/165, and fragments of a large painted store-jar and of types VI/1, XXV/173.

## P. 46.8. (1922.)

Normal middle-class house: unusual features, position of staircase (5) approached from small room (4) opening out of loggia (3), cf. O. 49.22; cupboard below stairs entered by door in main hall (6); master's lavatory (9), walls lime-washed, and traces of a brick seat at the west end, lies (rather abnormally) behind the spare room (7). Against the house wall outside room 11 was a small brick compartment like a window-box for flowers. Room 6, niche in north wall corresponding to cupboard door; traces of circular hearth in front of divan; in front of door from 3 a concealed brick-lined cist in the floor. Room 10 contained a mass of broken pottery, amongst which the types IV/159, VI/155, 220, XXV/249, XXVIII/193, XLI/1056, etc.

*Objects:* Fragment of cut and dyed leather: bronze needle, 22/546; fragment of alabaster bowl: clay moulds, M. 40, 41, 44: Mycenaean sherd, 22/542: graffiti, 22/553, 22/554. In the walled-up lane between this house and P. 46.11, under a brick against the wall of the former, a mass of beads in glaze, carnelian and glass; some belonged to a number of strings (22/551) attached to a bronze forehead-ornament, others (22/552) formed a single string, perhaps a bracelet.

## P. 46.9. (1922.)

Normal middle-class house, much ruined. An unusual feature is that the bathroom and lavatory (10, 11) appear to serve both rooms 9 and 12 (or 13, if this be really the second bedroom). Room 13 is unusual in having two brick-lined cists sunk in the floor; from it an opening at floor level 0·20 m. high by 0·40 m. wide leads into the small cupboard 14, which had, apparently, no other means of access. The walls of room 6 are heavily blackened by fire; in the corner of this room is a projecting brick cupboard, over which ran the return of the upper flight of stairs; the entrance to this cupboard (0·70 m. high) was a true arch, bricks being used as *vousoirs*.

*Objects:* Fragment of inscribed sandstone, 22/548: fragment of sandal: fragment of model clay bed: clay moulds M. 42, 43, 45, 48: slate palette, 22/549: wooden kohl-stick: flint knife: beads.

*Pottery:* I/169, IV/223, VI/143, XXV/247 and 248, XXVIII/195, LXIX/131.

## P. 46.10. (1922.)

Middle-class house, normal in plan but built with very thin walls. At the time of the abandonment of the site the entrance-door (1) had been blocked by a wall one brick thick built against the wooden jambs; this was a common practice, but in this case the evidence is unusually plain. Room 6 was an indoor kitchen (unusual) with box hearth and a brick-lined sink or drain below the floor running partly under room 7, a small closet with high brick threshold. Staircase (9) and room 10 much ruined. 14 was bathroom to 13 (bedroom), and 15 (outside house proper) may have been lavatory (the door was cut through the wall at a later date than the building). In the courtyard (17) was a small chamber (16) with no doorway, floored to the height of 0·35 m. with bricks laid on edge; this is difficult to explain unless it was a bedding for a wood floor of a granary entered from above, the

bricks being set thus to give ventilation below and prevent dry-rot: the remains, apparently of a staircase, on the west side of the structure may support this view.

Against the north wall of the main enclosure was a (ruined) storehouse, consisting of a staircase (18) giving access from above to three granaries (19, 20, 21), the last two communicating, but having no outer doors. Against the south wall of the main enclosure, the remains of a small house or workshop.

*Objects*: Glaze amulets, A. 26, 27: glaze bezel and ring, B. 47: clay mould, M. 39: fragment of square limestone gaming-board: clay plummet (?): Cypriote sherd, 22/543: Mycenaean sherd, 22/547.

*Pottery*: vi/190, xx/235, xlII/191, lxIV/199, lxxxIII/257.

#### P. 46.11. (1922.)

Fair sized, but with flimsy walls. An unusual feature was the large size of the rooms 4, 13 and 14; the last two were perhaps work-rooms, the domestic quarters being 8-12 and 7: the arrangement of the stairs is also rather unusual. In 5 were found fragments of four stone grille window frames (22/583 A, B, Pl. VI, fig. 4) heavily smoke-blackened, showing that they came from high up in the walls. Outbuildings to south fragmentary.

*Objects*: Bronze drill, 22/557: bronze needle, 22/556: two ivory ducks' heads, Pl. X, fig. 2, 22/558: glaze amulet, A. 25: glaze bezel, B. 49: lump of yellow paint.

#### P. 46.12. (1922.)

Probably an annexe of house P. 46.10; much ruined and plan incomplete. Room 1, oven against wall; 4, staircase; in 6, corner bin, and pot sunk in floor: western rooms destroyed.

*Objects*: Glaze ring, B. 50: clay mould, M. 46: fragments of glaze inlay, lotus pattern: limestone mould, 22/559: handle of small vase of Syrian black ware.

*Pottery*: xxv/184, 202, 205, l/193.

#### P. 46.13. (1922.)

Small irregular house entered from lane. Room 1 has remains of box hearth. Door of closet 4 has been bricked up: buried in floor, a large pot (broken in antiquity and mended with cement) and its cement stopper: through north wall a breach made to stair-cupboard (5). Room 7 taken up by a brick-lined pit divided into two by cross-wall, sides sloped inwards with rectangular trough at base; in the top of the brickwork at either end is a rectangular slot to take the ends of the central beam supporting the lid.

*Objects*: Fragment of carved ivory, 22/563: bronze knife, 0·055 long: 2 bronze needles, 22/569: bronze pin, 22/562: glaze cow's head, 22/561: glaze fish amulet, and amulet A. 28: clay mould, M. 47: lumps of blue and yellow paint: graffito, 22/568: fragments of painted pot with Bes faces, Pl. XLV, fig. 4.

*Pottery*: vi/152 and 161, xiv/147, xxv/203.

#### P. 46.14. (1922.)

Good middle-class house with courtyard, not raised, therefore approached by flat passage, not by ramp. Type fairly normal; for ground plan cf. P. 46.9, but here "master's bed-

room" (13), which has recess but no dais, has to the north a long closet or passage (14), at the end of which a cupboard (?) (15), whose only entrance is a hatch at ground level, 0·60 m. wide by 0·50 m. high.

*Objects*: Alabaster weight, 22/573 : haematite weight, 22/574 : bronze chisel, 22/578 : glaze amulet, A. 54 : clay mould, M. 54 : amphora handle with incised potmark. In room 16, quantities of leather, some fragments of sandals, some cut but unused pieces, and a lot of trimmings ; the regular refuse of a boot-maker's shop.

*Pottery*: III/142, VII/122, 123, XXV/182, LXXI/146, and fragments of painted pots types XLI/1056, LXXX/252.

#### P. 46.15. (1922.)

In entrance-room (1) box oven and flat hearth or hob at south end. 3, cupboard below stairs. 4, passage from stairfoot out into back yard. 2 has brazier, no divan. In 6, a square brick-lined cist 0·40 m. deep, and also an octagonal brick-lined pit 1·20 m. deep ; in the east wall of the room a hatch, 0·40 m. wide by 0·30 m. high, leads to room 7 ; two bricks in south-west corner and a stone projecting from the wall in north-west corner were probably shelf-supports.

*Objects*: Pierced limestone, 22/572 : fragment of limestone carving, 22/567 : bronze needle, 22/566 : stamped magic ball, 22/571 : amulets, A. 31, 33 : glaze bezel, B. 52 : clay moulds, M. 50, 51, 52 : Mycenaean sherds, 22/565.

*Pottery*: I/206, XXV/196 and 230.

#### P. 46.16. (1922.)

North courtyard walls destroyed : in court, an oven : a mud-floored sloped approach runs against north wall of house to front door. In 3 a stone bath : 0·80 m. up in east wall two holes for pegs, probably for skeining thread. 4 was staircase. In 8, behind a brick screen 0·55 m. high, a circular hearth on a carefully mud-paved floor.

*Objects*: Fragment of inscribed lintel, Pl. XXXIII, fig. 6, 22/575, with name Sheri : bronze tweezers, 22/579, and needle : fayence stud, 22/576 : clay mould, M. 49.

*Pottery*: IV/148, VI/166, XI/227, XXV/183, and fragments of types IV/1002 L, VI/162, IX/242, LXXI/146.

#### P. 46.17. (1922.)

Much ruined. In 1 (perhaps an open court ?) box hearth with low hob. 6, 7 and 8 were originally one room with a sunk brick-lined granary or cist ; later this was filled up and cross-walls built, but these apparently only 0·60 m. high, forming store-chests, not rooms proper.

*Objects*: Small scarab : fragment of red paint.

*Pottery*: LXXVI/228 and fragments of types XLIII/260 and LVI/69.

#### P. 46.18. (1922.)

Peculiar in that the courtyard and the three eastern rooms were built on to the house later, and do not align with it. Entrance from lane through courtyard having two sheds

at its south end. Room 7, north-east corner screened off by wall 0·90 m. high (for lavatory ?); in north-west corner a sleeper wall 0·15 m. high, apparently filled in behind to make a bed-platform; in south-east corner, large pot let into floor. Room 8, divan against south wall; in north-east corner a brick bin 0·60 m. high, then a recess, then in north-west corner a closet containing a brick-lined cist sunk 1·00 m. deep in floor.

*Objects*: Amulets, A. 29, 30: bronze needle: Cypriote sherd.

*Pottery*: iv/144, vi/162, ix/242, xx/245, LXXVIII/238.

#### P. 46.19. (1922.)

Almost wholly destroyed.

#### P. 46.20. (1922.)

Entrance-door in east wall blocked up. No features of interest.

*Objects*: Blue glaze grape-cluster, 22/570: glaze scarab, Pl. LIV, P. 46.20: fragment of mud jar-sealing, type N: clay mould, M. 56: 2 model mud bricks: fragments of blue and green paint: burnt grain: fragments of painted saucer, 22/577.

*Pottery*: i/214, III/141, iv/145, vi/153, XIV/241, XLIII/174.

#### P. 46.21. (1922.)

Poor house so ruined that plan remains incomplete. Entrance probably from south lane. In central north room a brick-lined pit 0·50 m. deep, wherein 10 mud bricks with brick-stamps, see p. 164.

*Objects*: Fragments of stone window-grille like those from P. 46.11: bronze needle, 22/581: stone drill-socket: mud jar-sealing, 22/580.

*Pottery*: XIII/172.

#### P. 46.22. (1922.)

Front door on lane bricked up when the cottage was abandoned.

*Objects*: Wooden kohl-stick: fragments of blue glaze: fragments of blue and yellow paint.

#### P. 46.23. (1922.)

Courtyard to north with square bin (?) in south-west corner. Front door probably in north wall, but this wall and east wall of 1 ruined down to floor level. In 1 box-hearth: in south wall a recess 0·50 m. wide with sill 0·20 m. above floor (back fallen out making breach to 3). In 3, brick-lined cist 0·60 m. deep; niche in west wall with frame and back painted plain red. In 4 box-hearth (?). Stairs open on 7: 8 is cupboard below stairs.

*Pottery*: XXV/181.

#### P. 47.30. (1922.)

Good house standing in its own grounds with porter's lodge, well and outbuildings: house itself fairly well preserved, walls about a metre high. In 3, box hearth. In 8, low divan: on jamb of door to 10, traces of black-and-white painted decoration *in situ* low down: also fallen

fragments of coloured horizontal bands (from upper jambs ?), and fragments (from wall ?) with tied papyrus bundles and chequer border: also fragments of moulded and painted lime plaster, petal and boss pattern, use doubtful. 12, bathroom (remains of cement on walls and floor) with north side screened off as lavatory. 13 has recess but no dais. 15, stairs with cupboards below.

*Objects*: Ivory gaming-piece, 22/530, and clay die, 22/529 (both in 10): bronze needle: scarab, A 21: clay moulds, M. 30, 32: bull's head spout, 22/519.

Porter's lodge, a single room against west wall of garden (main gate presumably just north of it, where wall is destroyed). But the ruined building in the south-west corner perhaps belongs to this.

*Objects*: Basalt bowl, diameter 0·20 m.: flint saw: Mycenaean sherd, 22/531: scarab, 22/540.

In the narrow passage south of the house, remains of an oven. Here, too, pot-bottoms containing coloured paints and resin, several mud jar-sealings, and much pottery, including two or three whole vases.

Eastern annexe much ruined: in north-west chamber a brick-lined cist.

*Objects*: Bronze drill, 22/535: magic ball, 22/536: scaraboid, 22/537: large lumps of yellow paint.

*Pottery*: iv/186, 201 and 222, v/176, 219 and 229, vi/151, 160, 177 and 185, vii/156, vii/178, 179 and 180, xxi/212, xxv/173.

#### P. 47.31-33. (1922.)

Large house standing in extensive garden grounds with garden-house, outbuildings, and well: main entrance (destroyed) probably in north end of west garden wall.

#### P. 47.31.

Annexe building, much ruined, comprising a small ill-built house of normal type with large rooms (work-shops ?) to the north of it; in the largest of these, a square brick column-base with pot embedded in floor beside it; the dwelling-house has normal living-room with divan and brazier and a brick-lined cist in south room.

*Objects*: Bronze axe with raw-hide binding, Pl. X, fig. 2, 22/526: alabaster spoon-bowl, 22/527: glaze bead, 22/528: fragment of malachite: mouth of Mycenaean vase.

*Pottery*: vi/150.

#### P. 47.32. (1922.)

Garden-house of normal type standing in a double court with small pylon gate in cross wall (steps ruined: walls 0·70 m. high).

*Objects*: Fragments of painted pot, 22/538.

*Pottery*: ix/170.

North of this a long building divided by cross walls: much ruined: probably sheds or stabling.

P. 47.33. (1922.)

Raised on platform and much ruined, the western half destroyed below floor level. Room 8, with divan, niche and central column-base, is probably an inner reception-room. 10 is complicated: the sleeper walls in front of the door are probably shelf-supports for a wardrobe; next comes a bath behind a screen wall, the platform reached by a cemented step (bath itself missing), and a small compartment, presumably the lavatory. 14 is staircase and cupboard.

*Objects:* Part of sculptor's plaster model, 22/539: sherd with rough charcoal sketch, 22/533: bronze chisel, 22/534: clay mould, M. 33.

*Pottery:* VI/153, VII/149.

## CHAPTER II.

## THE DOMESTIC ARCHITECTURE OF AKHETATEN.

OUR work would be in no sense complete did we not attempt to sum up what is known, after six seasons of excavation at el-'Amarneh, of the house and its construction. Each season, both during the German expedition and during our own, the work has been watched and recorded by trained architects, and in a certain sense it might almost be said that the main interest of the city site has been architectural. The full results of the work of the Deutsche Orient-Gesellschaft have not yet been published, and we have perforce to be contented with such details, by no means inconsiderable, as have been given by Borchardt in the various volumes of the *M.D.O.G.*, namely, Nos. 34, 46, 50, 52, 55 and 57. In what follows the numerous quotations from these works are placed in round brackets, and for purposes of economy merely the volume number and page are given, the letters *M.D.O.G.* being omitted. The few large houses cleared by Petrie in 1891 have also been studied, together with the description of them given in his *Tell el Amarna*, Chapter III. This work is referred to in round brackets simply as P. followed by the page number.

The complete house at Akhetaten stood in its own grounds and was accompanied by a large number of accessories in the way of outbuildings, not to mention the indispensable well. It will therefore be advisable to deal with the house itself first, and afterwards to treat of the grounds and their other contents.

## A.—THE HOUSE.

## 1. MATERIAL AND GENERAL APPEARANCE.

a. *Material*.—All houses at Akhetaten are built of unbaked sun-dried mud-bricks. Stone is occasionally used in the larger houses for thresholds and for the framework of the outer doorways (46.18), in which latter case it bears an inscription containing a short hymn to the Disk together with the titles and name of the owner of the house, e.g., Nakht, Ra'ñûfer, Pawah (46.18, Abb. 3), Ma'nekhtwetef (46.19 and Blatt 4). In the house of Ra'môse (55.18) the inner doorways of the house as well as the outer were of stone, but this was quite exceptional.<sup>1</sup> Limestone bases were also employed to support the wooden columns which held up the roof in the larger rooms.

Wood was very little (used) except for the columns, the roofing, and the supports of the staircase. In the trial house dug by the Germans in 1907 near el-Hâg Kandil (34.26)

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<sup>1</sup> Compare, however, M. 50.13.

a certain amount of wood inlay was found in the thicker walls, and two instances occurred in House O. 49.23 in connection with the staircase (see p. 16). The use of wood in minor semi-structural details was doubtless common, though the white ant has destroyed most of it; it is not unlikely that the lintels of doorways within the house were of wood, and the doors themselves certainly were.

In poorer houses the flooring was simply a coating of mud plaster. In richer houses this coating was underlaid by a stratum of ordinary bricks, and whitewashed or even painted in bright colours.<sup>1</sup> In the house of Nakht large flat tiles of mud took the place of ordinary bricks in the flooring.

*b. Shape and Size.*—The almost invariable form is a rectangle with a definite tendency to approximate to a square, due perhaps to the symmetrical grouping of rooms round a Central Hall. Practically the only houses which are not rectangular are such as have been fitted in between two or more other buildings not consistently oriented. It may be added here that there is a fixed tendency to orient the houses with their sides parallel to and at right angles to the river, *i.e.*, local<sup>2</sup> north-and-south. This is doubtless due to the love of orientation by the river innate in the house-builder as well as the tomb-builder in Egypt, partly to the fact that, in order to keep the whole town easily accessible from the river and within the shallow well area, it had been spread in a long line parallel to the river, with main streets consequently running in that direction.

In size the houses naturally varied, but it may be said that 20 metres square was about the average for the finer examples. The house of Pawaḥ the High-Priest, O. 49.1, measures roughly 25 m. by 22, while J. 53.1 is even larger, measuring 28 by 27, and that of Nakht is 29 by 26 without its porch.

*c. Plan.*—The essentials of the Egyptian house are a living-room, a sleeping-room, a kitchen, and a staircase leading to the roof. The Akhetaten mansion in all its complexity was developed out of this by the processes of multiplication and specialization. Thus the Central Hall is undoubtedly the development of the living-room, though in order to secure privacy it is, in all but the smallest houses, approached through an entrance-hall. This entrance-hall itself gradually assumes the proportions of a true room, the so-called loggia, and is in its turn approached from without through an anteroom. In many cases the loggia, which has probably become just as much a "living-room" as the Central Hall, is duplicated for reasons of climate (see below), and the anteroom and entrance are often duplicated with it. Meantime the bedroom of the poor man's home has become a suite of rooms, bedroom, bathroom and lavatory for the master of the house, together with other bedrooms for other members of the family. Other rooms have been added, serving purposes which in the small unit were performed in the living-room, but, curiously enough, the kitchen has been relegated to the outbuildings. Should it be necessary to divide the houses into groups according to their plans, three groups might be suggested, namely, houses with two loggias, houses with one loggia, and houses with no loggia. This division would closely correspond to that of large, medium, and small houses, inhabited by the rich, the middle, and the poorer classes

<sup>1</sup> Cf. *M.D.O.G.*, 34, p. 21.

<sup>2</sup> The Egyptian native orients everything by the Nile. Thus, at any point "local" north is the direction in which the river flows at that point, and may vary considerably from true north.

respectively, and houses of the third type would be found in almost every case to possess an indoor kitchen, a feature totally lacking in the others.

*d. Use of the various Rooms.*—This will be dealt with below under separate headings. Here it will suffice to premise that we are still remarkably ignorant on the point, and that in the lack of proper evidence the guesses of excavators and others must be regarded with the utmost distrust.

*e. Entrance.*—Houses are generally entered from the north or from the west or from both. The entrance consists of a brick ramp or flight of shallow steps leading along the side of the house in such a way that everyone who entered must pass beneath the large window of the loggia. At the top of the steps the person entering passed through the inscribed stone framework of the door into a small room whose roof was supported by a single column. From here a sharp turn brought him into the loggia either direct or through another small anteroom. We may imagine the outer anteroom as a kind of porter's lodge in which sat the doorkeeper.

*f. The loggias.*—The word loggia was first applied to the long and narrow room on the north side by Petrie, who says "It is evident that this was for a cool room facing north, and probably open along the north front, with the roof supported by pillars; in fact, a sort of verandah." As, however, the walls of these rooms were badly denuded, Petrie was unable to prove this hypothesis. (P. 20-21.)

Both the name and the hypothesis were taken over by the German excavators, and Borchardt further follows Petrie in assuming that the loggia had a large window (34.21 and 46.20). He produces no direct evidence for this, though some may well have been observed, but remarks that we are accustomed to see such large windows in the representations of palaces of this<sup>1</sup> and later periods. This is hardly conclusive. At the same time it is noticeable that the outer wall of the loggia is almost always very heavily denuded towards its centre, much more so than other walls of the house. This does suggest that there was a large window at this point, and the evidence from N. 49.10 (p. 20) supports the belief. Nevertheless, we still urgently require some house in which the wall is preserved high enough to show the sill of the window.

Many houses contain two loggias, one to the north and the other to the west. Borchardt's explanation of this (46.18), namely, that that on the north was used in summer weather, when shelter from the sun and exposure to the cooling wind of the north were advisable, while that on the west was used in winter when the sun's warmth was grateful, seems extremely plausible. Whether Borchardt is further justified in identifying the loggia with the *wšt* or broad hall, well known as a portion of an Egyptian palace or temple, and in calling it the reception-room (Empfangszimmer, 46.18) is far more doubtful.<sup>2</sup> Nothing has been found by us in any of these loggias which throws the faintest light on their use. From their position so near the entrance we may safely state that they are a public portion of the house, but that is all.

The walls of the loggias were sometimes painted, perhaps always in the better houses. The details of the decorative scheme are similar to those in the Central Hall (*q.v.*). The

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<sup>1</sup> See *Amtliche Berichte aus den Preussischen Sammlungen*, Vol. XL, *Der König am Fenster*.

<sup>2</sup> See below, on the Central Hall.

niches which form so important a feature of the Central Hall are also occasionally found in the loggias.

*g. The Central Hall.*—This room lies in the centre of the house, completely surrounded by other apartments. Both by position and development it was one of the most important rooms, and we shall certainly not be far from the truth in describing it as the main living-room. Borchardt identifies this room with the *wmt* of the Egyptian texts, and translates it die tiefe Halle (das tiefe Gemach), the Deep Hall. This translation is based on an ingenious comparison made by him between the Egyptian house, as exemplified by the Middle Kingdom dwellings found by Petrie at el-Lâhûn,<sup>1</sup> and the Egyptian palace and temple.<sup>2</sup> In each case Borchardt finds a Columned Hall (Säulenhalles or Überschwemmungshalle,<sup>3</sup> Egyptian *wšḥi*) leading into a Broad Hall (der breite Saal, Egyptian *wšyt*) the whole width of the house, which gives access to a Deep Hall (die tiefe Halle, Egyptian *wmt*), the deepest, in the sense of the most retired, room of the series. In the el-'Amarneh house, which differs most surprisingly in plan from that of el-Lâhûn, it is impossible to recognize the open or semi-open Columned Hall of el-Lâhûn, but Borchardt still sees the Broad Hall in the loggia and the Deep Hall in the Central Hall. He may be right in this identification, just as he may also be right in his comparison of the house with the temple. But in one thing he is certainly wrong, namely, in his translation of *wmt* as the Deep Hall. In the first place *wmt* does not mean deep but only thick, and in the second place Gardiner has pointed out that the passages in which the *wmt* is mentioned show it to have been not a room or hall, but a gateway.<sup>4</sup> The Egyptian name for the Central Hall is therefore still unknown to us.

What was the purpose of the Central Hall? Beyond the general assertion that it was a living-room we are not in a position to say much. The almost invariable presence of a brazier, often permanently plastered into the floor, shows that the inhabitants were wont to sit there in the cold of the evening, and the lustration-slab, an equally essential feature, points to the performance there of lustrations, presumably on arrival from without, or before or during meals. But we are hardly justified in inferring from this that the Central Hall was the dining-room, and in calling it the Esszimmer or Speisezimmer (34.21<sup>5</sup> and 46.21). There is, it is true, no evidence to disprove this, but it remains at best a conjecture.

The lighting of the Central Hall, cut off as this room was from the outer walls of the house, presented a serious problem, which the Egyptian architect solved in a simple manner. He carried the walls some distance higher than the roofing of the surrounding rooms, and inserted small windows in the upper part. This system of lighting is still commonly used

<sup>1</sup> PETRIE, *Illahun, Kahun and Gurob*, pp. 5-8, and Pl. XIV; PETRIE, *Kahun, Gurob and Hawara*, pp. 23-24 and Pl. XV.

<sup>2</sup> Ä.Z., 34, p. 108, and references quoted there in note 1.

<sup>3</sup> In Ä.Z., 40, p. 48, Borchardt now identifies the *wšḥi* or Überschwemmungshalle with the *wšyt* or breiter Saal, and supposes the Egyptian name of the Outer Hall to be unknown.

<sup>4</sup> GARDINER, *Notes on the Story of Sinuhe*, pp. 95-96.

<sup>5</sup> "Aus Abbildungen wissen wir, dass diese 'tiefe Halle' unserem Esszimmer entspricht." We have tried in vain to find some representation which might justify this belief. When, moreover, we read (55.21) that the lustration-slab in the Central Hall of Ra'mose "vielleicht während der Mahlzeiten als Platz für die Sessel diente," we can only express amazement.

in Egypt, and, in a country where the light is so intense, comparatively small windows high in the walls suffice to light a room, especially if, as at Akhetaten, the walls be wholly or even partly coated with whitewash. The windows themselves consisted of vertically slotted gratings made of stone or cement (50.22), Pl. VI, fig. 4. See Houses P. 46.11 and 21 (1922).

We must thus picture the walls of the Central Hall as rising above the surrounding roofing in the form of a low square tower with grated windows. Borchardt rightly points out (52.19-20) that such houses are unknown in the few contemporary representations which we possess. He therefore hazards the very reasonable guess that the outer walls of the house were also run up to some little height above the general roofing and so hid the tower from view, without seriously reducing the amount of light which reached its windows. This explanation is the more likely since such an arrangement would have furnished the roof, which, as we know from the existence of the stairs, was very much used, with a coping-wall.

An important corollary follows from this. If the Central Hall was to have any light at all either there could be no second storey to the rooms around it, or, if there was, its walls must have been carried up through two storeys and a little over. It would be unwise to deny outright the possibility of this last, but it is not very probable, and in no case do we ever find in and about the ruins of the Central Hall anything like the amount of brick which might reasonably be expected, either in position or in ruin, had this room ever risen to the height suggested. At the same time the 1922 Expedition has made out a very strong case for a second storey over the West and North Loggias of the house of Nakht. This case is, it is true, based solely on the presence of four column-bases in the ruins of the West Loggia, and seven more outside the wall of the North Loggia, for which no place can be found on the ground floor. Either these bases came from a second storey, or they were brought here from some other house, and it is not easy to suggest any reason for such a thing having happened. The case is one of purely circumstantial evidence, and will doubtless be judged differently by different minds.<sup>1</sup> In any case the admission of the existence of a second storey in the house of Nakht need not involve the supposition of two storeys in any other house, especially in the smaller examples. It should not be forgotten that the German expedition, though fully alive to the possibilities of such a thing, found no trace of an upper storey in any of the large houses excavated by them, and our campaign of 1921 was equally negative in this respect.

The columns which upheld the roof of the Central Hall were, like those elsewhere in the house, of wood, set on a circular base of limestone, sometimes with a countersinking in its upper surface to receive the base of the column. Judging from paint-marks found in several cases on the stone base the columns were often coloured a reddish brown (55.24). In N. 49.39, however, were found in 1922 fragments of mud plaster from round a wooden shaft decorated with conventional petal and circle patterns of the usual type in red, blue, white and yellow.

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<sup>1</sup> Mr. Woolley rightly calls my attention to the possibility that the flimsy constructions found on the roofs of some of the poorer houses in the Eastern Village may have been imitations of more solid and permanent superstructures in the great houses of the Main City.

The nature of the roofing may be gathered from the remains found in the Eastern Village. The only differences between that of the huts in the village and that of the fine houses in the town were those of scale and finish. In small rooms the main roof beams were laid from wall to wall, in larger rooms the shortness of the beams procurable was helped out by the use of columns and architraves. Over the main beams smaller pieces of wood were laid at right-angles to them. Above these again were placed mats, or reeds roughly bound together, and the whole was covered with a thick layer of stamped mud. In the house of Nakht, and probably in all the finer houses, the under surface of the ceiling was plastered and painted a bright blue.

Numerous doors allowed of movement between the Central Hall and the rooms which surrounded it on every side. A modern visitor would have found these doors low, for they were no higher than the height of an average man (55.21). In 1922 a complete door-frame of sandstone was found in position. It led from the Central Hall of M. 50.13 into one of the bedrooms. It was painted red, and stood 1·48 m. in height, with a breadth of 0·63 m. In a good house some of these doorways were double, more particularly that which led into the North Loggia, which was in addition often flanked by two single doorways. The doors themselves were of painted wood, not swinging like ours on horizontal hinges, but opening on vertical pivots at the side, turning in a hole in the lintel above and another in the threshold beneath.

From some points of view the most interesting feature of the Central Hall is the niches which are found there, and also occasionally in the loggias. These niches are recesses in the solid face of the wall, sometimes one brick, sometimes two bricks in depth from front to back, with in the one case a singly and in the other a doubly rebated edge. They extend down to the floor, but their height is still a matter of some uncertainty. A niche in a house excavated by Petrie was found by the German excavators, who re-examined it, to end at a height of 1·70 m., probably the height of the doors or thereabouts (52.16). The majority of niches are painted either a plain bright red or in three vertical panels of equal breadth, the two outer red and the central yellow. On the wall on either side of the niche are sometimes vertical columns of inscription giving the name and titles of the owner of the house, together with a short prayer to the Disk. Niches generally face a doorway in the opposite wall, and when this doorway is double the niche too is double, *i.e.*, contains two recesses side by side.

The apparent uselessness of these niches, together with the prayers to the Disk by which they are so often flanked, at once suggested that they might have some ritual use and significance. On the other hand similar prayers are found on the lintels of true doorways, and the fact that niches are generally placed opposite to doorways suggests that they may be purely architectonic and ornamental in nature, growing out of a love of symmetry on the part of the builder, who, if he could not balance a doorway with a true doorway, was determined to balance it with a false one. Thus, as early as 1911, Borchardt was inclined to believe (46.22) that the simpler niches were purely architectural balances against the true doorways, but that at the same time some of the more complicated might have a ritual significance. To this last conclusion he was led by the finding in front of a double niche in O. 49.1 of a falcon's head in mud, painted similarly to the niche, which suggested a restoration of the whole on the lines of the double niches in the sanctuaries of the Seti Temple at

Abydos. In 1912 (50.18-19) Borchardt appears to have dropped the idea of ritual significance even for the great double niches, which he takes to be purely balances to double doorways, an opinion which he confirms in 1913 (52.16), and again in 1914 (55.20-21). This point of view certainly seemed reasonable, and the painting of the niche in vertical panels completed the illusion of a false door. In 1922, however, were found niches which seem to reopen the question. In the house of Nakht, in the north niche of the West Loggia, which was standing to a greater height than the rest, the yellow panel went down to the ground, and at 1·50 m. above floor level were the feet of the King, who was represented as adoring the cartouches of the Aten. Presumably the other niches in the house, in all of which the lower part of the central yellow panel remains, were similarly decorated. In M. 50.16, a small house, the feet of the figures, which with a little drapery and the legs of a throne were all that survived, came only 0·90 m. above floor level: the top of the picture was at 1·35 m. above the floor, and over this was a design of some sort; there remained no evidence as to the total original height of the niche. In front of the south niche in the West Loggia of the Vizier's house were found fragments of inscribed plaster which must have come from above the figured panel. They are from a hymn to the Aten written in vertical columns; there is no trace of this up to the height of 1·30 m., to which the yellow ground was preserved, so that they belong above the picture of the king, and imply that the niche was at least 2 m. high. In front of this niche, against the centre, there was a small empty vase buried up to its rim in the floor. If this vase is part of the original arrangements of the niche—its small size seems to preclude the theory of a store jar—it must have been a receptacle for offerings, and the niche must have had a religious character. The question whether the niches in general were religious in origin, or whether they were features purely architectural in origin and only afterwards adapted to a ritual use, obviously cannot be answered.

The decoration of the Central Hall was of an elaborate design, employed also in the loggias. The numerous doorways and windows offered in themselves a pleasing variety, and these alone, when framed in a bright and harmonious colour scheme, would have sufficed to give the room an ornamental appearance. But the Egyptian did not rest here. There were still large stretches of blank wall to be dealt with. Here, however, utility must be the first consideration, and the need for exploiting to the full the scanty but powerful light which filtered through the high and heavily barred windows forced him in most cases to give the walls a plain white dado up to about the height of a man. Above this the wall bore the dull grey surface of the mud plaster, and it was on this that the painted decoration was applied. It seems to have consisted in most cases of a series of festoons arranged along the top of the walls with blank spaces between them. These festoons are of the usual Egyptian type, formed of fruits, flowers, leaves and petals (Pl. XV, fig. 1). In the North Loggia of N. 49.18, the house of Ra'nûfer, considerable remains of the painted plaster were found. In this case the festoons were surmounted by a straight frieze of inverted water lilies, some half open and some still in bud (Pl. XV, fig. 4). It is on these, together with a few fragments actually found there, that Mr. Newton has based the wall decoration in his restoration of the Central Hall of Nakht on Pl. IV. The festoons were sometimes combined with further design, for they are crossed obliquely by a pair of elaborately ornamented straps or ribbons. In the example just quoted these run outwards and downwards, but the fragments do not

enable us to restore the object which was attached to them. In another example, however, (52.18, Abb. 4), from House P. 47.5, the straps run inwards and downwards, meeting at the bottom of the festoon, and supporting there a small representation of a shrine. It will escape no one's notice that the design thus produced is precisely that occasionally found on human-shaped sarcophagi and mummy cartonnage of this and later periods, where the festoon or garland is placed over the chest of the mummy, and the shrine-shaped pectoral, sometimes real and sometimes merely painted, appears below it.

Between the festoons less conventional scenes were often introduced. Thus the German excavators (34.21) write as follows concerning the decoration of the loggia in the trial house near et-Til. "Gay garlands of water lilies, cornflowers and poppies, between which were also hung still-life scenes of birds, enlivened the walls, and must have given the room a very bright character." A similar arrangement (52.17) existed in P. 47.5. One instance of these interspersed scenes was found in 1921, again in the North Loggia of N. 49.18. Mr. Newton's drawing on Pl. XV, fig. 2, shows all that was found, but it is not easy to imagine quite how such a scene of geese, butterflies and plant life could be framed and brought into harmony with the festoons. It is to be presumed that the German excavators found indications which justify the position to which they assign these scenes. We certainly found nothing to prove it, and would prefer to leave the question open until the full publication of their evidence.

With regard to the decoration of the door- and window-frames a certain amount of evidence exists. In the Central Hall of Ra'môse the Germans found remains of brightly painted lintels to the doors, with roll and cavetto cornices (55.23). Outside the loggia of House J. 53.1, moreover, they found a portion of a frieze which surmounted the framing of the large window or windows (46.23-24 and Blatt 5), and was itself surmounted by a roll and cavetto. This, it should be noted, was on the outside of the house, and is the only instance as yet recorded to prove that the exterior of the el-'Amarneh houses was decorated. In the North Loggia of N. 49.18 we found in 1921 a piece of a similar frieze, Pl. XV, fig. 3, in which a band of running spirals is a conspicuous feature. It is impossible to say whether this came from within or without the loggia, for walls may fall outward or inward according to chance, and the seven small fragments were found scattered over the room. If the frieze came from outside it was probably over the window; if from inside, it is more likely to have formed part of the decoration of a door lintel.

The inner surfaces of the door jambs have been restored by Borchardt (55. Blatt 2) as painted from top to bottom with horizontal bands of different colours. The evidence in the house of Nakht tends to show that there at least the lower half of the jamb was white, and only the upper part was painted in colours. Despite such small details as this a comparison of the German restoration of the Central Hall of Ra'môse (55. Blatt 2) with Mr. Newton's restoration of that of Nakht will show that in regard to the general scheme of decoration of the Akhetaten house the two expeditions were led to very similar conclusions.

Only one house, that of Nakht, has yielded evidence of painted ceilings. Here, in the Central Hall, the colour was a rich blue.

A conspicuous feature of every Central Hall is the lustration-slab. This invariably lies in front of one of the three walls, the east, the west, or the south, the north being mostly occupied by the doorways leading into the North Loggia. The slab is of limestone, often rather roughly dressed, with a raised edge and a runnel at one side to lead the water off

into a vase placed in a hole in the floor to receive it. There is nothing except position to distinguish these lustration-slabs from the bath slabs in the bathroom, save that the latter are frequently placed in a corner and the wall around them protected from the splashing by stone slabs or plaster. From this fact we may infer that the lustrations were of a more gentle kind than the ablutions, and less calculated to damage the neighbouring walls. Doubtless they consisted merely in the pouring of water possibly containing natron over the hands and feet.<sup>1</sup>

In each Central Hall stood a brazier. This consisted of nothing more than a rough earthenware open dish containing ashes. Borchardt compares this (34.22-23) with the *mangal*, the portable stove of the Levant; but the braziers were not in all cases portable, for they were frequently cemented down into the floor, and therefore ought to be regarded quite definitely as fixed hearths. Sometimes a small brick dais was laid on the floor, and into this the dish was sunk and plastered. In this case the dais was prolonged at the one side into a hob of the form shown in Pl. VI, fig. 6. The reason for this is difficult to see. In the illustration given a small pot-stand of limestone stands among the ashes which fill the dish, and in its concave top are the remains of a small pottery bowl. Possibly the hearth had here been used to warm water, but there is no other case of the same kind. It is quite certain that the cooking of the establishment was done not in the Central Hall but outside, and that the hearth served primarily to warm the room, to which the family probably retired in the cold evenings. The brazier is never placed up against a wall; it is most frequently in front of the divan or in the centre of the Hall.

Every Central Hall contains one or even two rectangular daises or divans, built up in front of the centre of one or more of its walls. These can hardly be termed mastabas, for they are never more than one brick in height and are better regarded as a raised portion of the floor. Perhaps it was on these that the chairs or small stone seats (Pl. XIV, fig. 8) were placed. In the Central Hall and Square Room of Nakht these daises had a raised edge or coping, with three entrances.

*h. The so-called Master's Bedroom.*—In every house occurs in the inmost portion a room which at its inner end narrows by the width of one brick to form a kind of recess, occupying the whole width of the room. The depth of this narrower portion is about 1·40 m. from front to back, and its floor is raised into a dais one brick in height. It would seem to have been Petrie who first suggested that this was the master's sleeping room, "with the raised portion for the bed place" (P. 21). Borchardt follows him, for we read (34.23-24): "The bedroom itself, although the furniture is now lacking, is clearly to be recognized by the bed niche." It is a little difficult to see why a recess of this type should presuppose a bed, but the conclusion is quite possibly correct, for this room so often lies in the closest proximity to the bathroom and lavatory. The house of Nakht contained two of these recessed rooms, Room 27 with its bathroom and lavatory 28 and 29, and Room 21, which was perhaps the bedroom of the mistress.

*j. Bathroom.*—This was invariably a small room with a bath-slab of limestone fitted into one corner, and often two upright slabs to protect the walls from being splashed.

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<sup>1</sup> See Hastings' *Dictionary of Religion and Ethics*, article *Purification (Egyptian)*, by A. M. Blackman.

Pl. VI, fig. 1 is an excellent example.<sup>1</sup> Here the water originally ran off into a vase cemented into the floor (see p. 30). In the trial house excavated by the Germans near et-Til the water was run across the floor and out through a hole in the wall. Other bathrooms on the site are drained similarly, but the use of a drainage vase in the room itself is equally common (*cf.* P. 46.10). For an extemporized drain see above, p. 29.

*k. Lavatory.*—This lay side by side with the bathroom. It was a small narrow room, at the far end of which is a primitive brick-built seat. This has a rectangular gap in the centre, in one instance rounded at the back (50.19–22). In the house of Nakht two brick supports and a seat of wood seem to have taken the place of the more solid brick seat. The arrangement was of the nature of a simple earth closet, a movable vase being placed beneath the seat.

*l. The Square Room.*—No room in the house has given more food for conjecture than the small square one-columned apartment which frequently lies south of the Central Hall, and is recognizable from its shape and position in almost every house of any size. In 1911 Borchardt suggested with all reserve that this (das quadratische Zimmer) was the workroom of the master, and that the small closet-like rooms which surrounded it held his papers and valuables (46.22). In 1913 he was tempted (52.20) to explain it as the living quarters of the wife and children, but fell back on the original suggestion of a workroom for the master, the more so as the room sometimes must have had a window in the south wall of the house from which the master could command a view of his storerooms and granaries in the courtyard. In 1914 (55.19–20) he definitely accepted the idea that it constituted the wife's apartment. He noted in the first place that the usual type of Egyptian window, placed high up for lighting and not for seeing through, would not have enabled the master to watch his granaries from this room, and that therefore this argument could no longer be used. Moreover, in the house of Ra'môse a small closet opening out of this room had had on two sides broad wooden shelves resting on brick supports 70 cm. high; “on and under which the clothes-chests of the wife may well have been placed.” Moreover, a niche in this same room is the only place preserved in the house where the name of the wife of Ra'môse occurs, though this must be discounted by the possibility that it may also have existed on the jambs of doors or niches now destroyed.

Borchardt therefore reverts to the idea that the Square Room is the room of the mistress. The argument is somewhat slender, for surely the husband may be allowed a wardrobe for his clothes as well as the wife. The solution of the problem would appear to be indicated by the finds in the house of Nakht, where the Square Room is fitted up with stone divan and lustration-slab in a manner precisely similar to that of the Central Hall. Even the dish of charcoal which served as a hearth was not wanting. This room is clearly an inner and more private living-room of the same kind as the Central Hall, but smaller. We must suppose either that it was used by the women and children of the family, or that it was used by the whole family in place of the Central Hall on occasions when there were no guests and space and ceremony could be dispensed with. When the Square Room was completely isolated from the outer walls of the house it must either have been indirectly lighted

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<sup>1</sup> Cf. *Bull. Metropol. Mus. of Art*, Supplement, March, 1918, p. 13, fig. 9.

from the Central Hall and the small closets south of it, or it must have had a raised roof and windows high in its walls after the manner of the Central Hall.

*m. Smaller Rooms.*—It would be folly to attempt to assign a purpose to the numerous small rooms of the house. Some were mere storage closets. In the house of Nakht several had shelves raised on brick supports, see especially Rooms 14, 15, 17 and 18, in each of which the brick supports divided the space beneath the shelves into three separate compartments. The smaller inner rooms were lighted only indirectly, and in order to make the most of the light entering them from other apartments their walls, at least up to a considerable height, were whitewashed.

*n. The Stairs.*—The staircase, with one or two exceptions, e.g. O. 49.22 and P. 46.8, opens off the Central Hall, from which it was separated by a door, the marks of which in the stone threshold were very clearly observable in N. 49.18. Unless we suppose a second storey the staircase must have led out on to the roof of the house, where shelters against the heat were probably erected, of wood or of even lighter material. In some cases the stair ran straight up without a turn, in others it turned through a right-angle. In either case the first three or four steps were built up of solid brick while the remainder were of brick supported on beams in the manner detailed on p. 16. (See also 34.23, 46.22 and 50.22.) In House K. 51.1 the staircase was observed to be fitted with a balustrade of brick with a rounded coping.

#### B.—THE GARDEN AND ITS CONTENTS.

All large houses lie in their own grounds, which are surrounded by a high wall ensuring complete privacy from the street and probably from neighbouring gardens. (See p. 20 for proof of this.) The grounds are entered from the street by a gateway which modern requirements would find small, but which was quite broad enough to admit an Egyptian chariot. Outside this gateway two short lengths of wall jut out at right-angles into the street. No gateway has been preserved complete, but the remains of these walls are in some cases too high to indicate a mere balustrade, and Borchardt (52.13) surmises that they may have supported a barrel vault forming a short covered entrance to the gate. The wall which encloses the estate is usually two bricks in thickness. In some cases, particularly when the thickness is only that of one brick, it is strengthened on the inside by buttresses at intervals (see especially the wall of N. 49.10).

Within the enclosure a twofold division is in most cases discernible. In the one half is the house proper with its stalls, stables, store-rooms, granaries and kitchens, while the other comprises the garden with its well and summer-house. The houses of Pawah the High-Priest (O. 49.1) and of the Overseer of the Cattle (Q. 46.1) are good examples of this, but the division is also clear in many smaller houses.

*1. Gardens.*—For our knowledge of the laying-out of the garden proper we are almost entirely dependent on the work of the German expedition. As early as 1911 (46.15–16) the excavators reported the discovery of pits of Nile mud sunk into the sand of the gardens for the planting of trees.<sup>1</sup> In the enclosure of House M. 47.1 (50.17, with Abb. 8, 9 and 10)

<sup>1</sup> This method is still employed in Egypt. In the middle of the town-mounds of Akhetaten are two rather weakly palm trees planted there in modern times, each in its pit of mud.

were found similar mud-pits for trees, symmetrically arranged about the summer-house, and in N.49.9 were rectangular beds of mud forming perhaps a kind of kitchen-garden. The finest example of a garden yet found is that of Q.46.1, the house of the Overseer of the Cattle of the Aten (52.11-12). It has an area of no less than 1,700 square metres. A double row of trees formed an alley leading from the pylon-like entrance to the rectangular terraced well, behind which again lay the summer-house. All the trees and plants were set in pits of mud. Round the top of each pit was a circle of bricks intended to prevent the watering from washing away the soil brought hither from the cultivation with such labour. Small plants were sometimes placed in vases let into the ground and pierced with holes to let the water through. This house had also a second garden running the whole length of its street front, and a similar extra garden was found in O.48.14. In the latter case pits of mud surrounded by rectangular lines of bricks were found (55.13).

2. *Wells*.—The wells first discovered on the site were put down by the German excavators as ponds or ornamental lakes (46.15). The mistake was a natural one, for the very extensive opening seemed quite out of keeping with what might be expected of a well mouth. It was, however, observed that with a water level about 8 metres below the surface at the best of times, these ponds could never have been very ornamental. In 1912 (50.12-14) the Germans dug out completely many of these ponds and found that they were all wells. That illustrated (50.12, Abb. 4 and 5; House O.49.20) differs in no important respect from that in N.49.18 cleared by us and described on p. 11 above. Borchardt expresses the opinion that the water was in many cases drawn up from the lower shaft of the well by means of a *shaduf* of the modern type worked from the platform at the bottom of the upper shaft. This seems to be borne out by the well-known picture of a garden with well and summer-house, DAVIES, I., Pl. 32, where a *shaduf* is shown, apparently on the platform. Yet the supposition seems unlikely in view of the fact that on the platform of this particular well, as also in most other cases, the maximum length for the arm of the *shaduf* would be about two metres, which would be useless. We must therefore assume that, in the smaller wells at least, the *shaduf*, if indeed it existed, was worked from the surface of the ground, and that the bucket was seized as it came up by someone standing on the platform, and there emptied into the jars of the bearers.

3. *Garden-houses*.—The building which we have somewhat colourlessly named a garden-house lies beside the well. In 1921 no well preserved example was found. In the house of the High-Priest, however, the German expedition found an example which they describe as follows (46.15): "A kiosk, a small room with columned fore-hall, and a ramp in front of this. Its interior was ornamented with wall-paintings of an adoration scene showing the royal family before the rayed Disk of the Sun." The garden-house of House P.47.32, excavated in 1922, yielded fragments of a similar painted scene, and it is therefore possible that the building served as an outdoor shrine. At the same time it would be well to remember that religious fervour ran high in this period, and the mere fact that a building was adorned by a scene of Aten-worship must not be taken as a proof that the structure itself was built with a religious purpose.

## C.—OUTBUILDINGS.

Quite distinct from the garden and its garden-house are the domestic outbuildings. These comprise the stalls for cattle, probably stables for horses, granaries, store-rooms, and kitchens. In some of the larger estates there is even a second and smaller house in one corner of the enclosure (46.17), e.g. O.49.9, O.49.7 and probably O.49.1. This house may be interpreted as the servants' quarters or the *harim* according as the fancy of the reader dictates, for there is not a fragment of evidence on the subject.

1. *Stalls*.—Cattle stalls were first found by the German expedition in 1907 (34.25). In 1911 others were found in particularly good condition (46.16–17); in the ground were still fixed stones with holes to which the cattle were tethered, and along the wall was a row of mangers. In the stable of one house fragments still remained of the leather covering and the attachments of a chariot. In the house of the Overseer of the Cattle of the Disk the stalls were naturally of considerable extent (52.13–14, and Abb. 2), and the stone tying-pegs and the brick mangers built into the wall were still to be observed. The expeditions of 1921 and 1922 found no very striking examples of stalls in the main town, but a room in No. 12 Gate Street, in the Eastern Village, which had been adapted to this purpose, forms an interesting parallel.

2. *Store-rooms*.—Some of the largest houses possessed among their outbuildings a row of parallel narrow chambers which are probably to be regarded as store-rooms (34.25 and 52.15), though the German excavators do not definitely state that remains were found in them to prove this. In two cases, the trial house near et-Til (34.25), and the house of the Overseer of the Cattle (Q.46.1), the doors of these store-rooms were preceded by a colonnade where the officials checking the incoming and outgoing of their contents might have shelter from the sun.

3. *Granaries*.—Near the store-rooms were the great circular granaries in which the loose grain was stored, poured in perhaps at the top,<sup>1</sup> and taken out from a door in the side near the bottom, after the manner so often seen both in pictures and models. As they now stand these granaries are cylindrical structures with floors sunk in many cases about a metre below the surface, and a small rectangular opening in one side at about the ground level. They are undoubtedly to be imagined as finished off with a brick dome above.

Humbler citizens preserved their grain in much more simple fashion. They dug a round or rectangular pit in the sand, lined it with ashes, and threw in layers of corn and ashes alternately until the pit was full. The same method of protecting the grain against the attacks of insects and worms is still in use to-day in Egypt.

4. *Kitchens*.—The kitchens of the great houses were certainly outside. In almost every case the outbuildings contain one or more of the simple pottery ovens for baking bread. These were cylindrical jars of rough thick pottery standing about 1 m. high, and sometimes narrowing a little towards the top, Pl. XVII, fig. 6.<sup>2</sup> They are completely open top and bottom. The whole pot is coated on the outside with a thick layer of mud or even bricks.

<sup>1</sup> In the absence of any means of reaching the top of these rather lofty granaries, this must not be regarded as certain. Possibly a wooden flight of steps was used.

<sup>2</sup> Cf. those found at Lisht. *Bull. of the Metropol. Mus. of Art*, 1922, Part II, p. 15, figs. 15 and 16.

The fire, lit inside the oven and fed through a small hole at the bottom, raises the temperature to the required height, which is retained by the thick coating even when the fire is allowed to die down. The flat loaves are introduced from above in coarse pottery trays or dishes, Pl. XLVI, Type III. In a large house these ovens may be as many as four side by side. We are unable to find any evidence to support Borchardt's suggestion (50.18) that the loaves, in addition to being let down into the oven from above, were in some cases stuck on to the outside of the oven to bake, and this belief would seem to rest solely on the evidence of certain representations in tomb pictures.

Apart from the baking of bread, the roasting and boiling must have been done at open fires, built up against a wall of the kitchen and bordered on either side by a low wall of bricks.<sup>1</sup>

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<sup>1</sup> *Op. cit.*, Supplement, March 1918, p. 13, fig. 10.

## CHAPTER III.

## THE EASTERN VILLAGE.

## THE SITE.

ALMOST in the centre of the arc formed by the high desert behind Akhetaten there runs out from the limestone cliffs a long and narrow promontory, broken up by shallow valleys and rising here and there to low peaks, which, broadening at its western point, encloses a small cup-like hollow, open to the south, but from the royal city completely hidden behind its flat-topped rim of steep pebble-strewn hill. In the German map (TIMME, 1917) this valley is marked as a cemetery. Actually there are graves in the *wādī* just to the north and one or two on the hill crest, and the German excavators in 1907 opened a few of these and reported that the burial furniture in them belonged to the time of the New Kingdom. In 1921, when the Egypt Exploration Society started to dig in the neighbourhood, its excavators were attracted less by the tomb shafts than by the remains of brickwork on the slopes and in the bottom of the valley itself: a very little work sufficed to show that the constructions on the hill-sides were funerary chapels of a peculiar type, and that the ruins in the valley bottom were those of houses. In the spring of 1921 four house-sites were cleared by way of trial; in the following season a sufficient number of houses were excavated to give a satisfactory idea of the whole settlement, while leaving the remainder protected by their covering of sand and débris for the excavators of a future generation.

It is a curious spot in which to find a village, especially in Upper Egypt, where the peasants live as close as possible to the fields they cultivate, building their houses along the strip between the tilled land and the desert; this village is far from any possible cultivation, as far away into the desert as water-transport would allow—for there can have been no wells in this high sandy valley, and all water must have been laboriously carried from some well or canal down in the plain, if not from the Nile itself. It would seem to be intentionally separate from Akhetaten and secluded from it. Yet it is a central site; for, as the map shows, it is a converging point for half a dozen of the roads still to be traced across the low desert; and it is just about half-way between the northern and the southern groups of rock-tombs, with both of which it is connected by those roads. The place is a workmen's settlement, and it is difficult to avoid the conclusion that its inhabitants were the men employed on the great rock-tombs which were being excavated on the edge of the Upper Desert for the noblemen of Akhenaten's court.<sup>1</sup> Their compound was surrounded by a stout and presumably fairly lofty wall<sup>2</sup> with very limited means of exit, patrol-roads running along

<sup>1</sup> The mention in the fragmentary inscription found in No. 10 Main Street of "herdsman" is in itself doubtful, and is perhaps less likely to refer to the owner than to some attribute of the Aten. See p. 147.

<sup>2</sup> The position of the village in the bottom of a cup-like hollow, entirely overlooked from the hills which rise sharply from its walls, shows that these walls were in no sense defensive; however high they were (within reason) they would have been commanded from the crests. The walls were intended perhaps to keep men in; they would never have served to keep an enemy out.

the hill-tops encircled it on three sides, and guard-houses were built upon the main road leading to Akhetaten. Perhaps because their profession bore something of the stigma which we know attached to the embalmers, perhaps because tomb-workers in general shared the ill-repute earned by their obstreperous mates at Thebes, they were removed as far as might be from the neighbourhood of the city; at any rate, the fact of this place lying more conveniently to their work than any other was a good practical reason to reinforce a prejudice.

Of course, the rich alone could afford, or were given by royal favour, elaborate tombs adorned with columns and reliefs cut in the solid rock; but poorer men died no less than they, and demanded—or their relatives did—a less expensive kind of burial. Many of these would require rock-cut graves, though of a simpler sort, and nowhere else did rock come down so close to the main quarter of the city; this, then, would seem to be an admirable site for a cemetery of the second class, and clearly there was every intention of so using it. To put the tombs in the same valley as the village would have had a double advantage; the grave-diggers would have been closer to their work, and the tomb-chapels with their paintings and offerings would have been under the eyes of the villagers responsible for their maintenance and safety. Such a precaution was indeed most necessary. Tomb-plundering was common, and if in the case of the orthodox the fear of sacrilege did not deter the criminals, plenty of people then in Egypt might think it no crime at all to violate the graves of Aten heretics. All round the rock amphitheatre of el-'Amarneh run the roads of the old patrols. These were not on guard against any foreign enemy; one of their duties doubtless was to prevent desertion on the part of the slaves employed on the buildings of the new capital; another to keep out the profane from the sacred site of Akhetaten, and this chiefly because such persons might well satisfy their religious scruples by damaging or defacing monuments. If the necropolis of Thebes had to be regularly patrolled, the cemetery of the Aten worshippers stood in greater need of protection, and it would have been no small advantage to have had the graves actually in sight of the grave-diggers' homes. Unluckily this proved impossible. The rock of the valley is of the worst quality, a crumbly marl which will not stand cutting, and where there does seem to be better stone it is but a thin stratum below which are huge boulders. Several attempts to cut shaft-graves were made, and failed, and in consequence the valley was given up as hopeless and the shafts were sunk in the next wady, 200 m. or so to the north, and in the plateau beyond that. But the supervision of the tomb-chapels here would have been difficult, and so the chapels were separated from the tombs, and we find the shrines built in tiers on the slope just outside the village wall, while the tomb-shafts themselves are out of sight over the hill. There was good precedent for such separation, and in this case it was clearly advisable.

The village, then, was the home of the tomb-diggers and grave-tenders of the royal city, a class of men whom for various reasons it was well to keep at a distance and under discipline. This goes far to explain the peculiar features of the building as well as its position.

#### TOWN PLANNING.

The striking feature of the place is its regularity, Pls. XVI and XVII, fig. 1. Akhetaten itself, like any modern village in Egypt, straggled along the edge between the desert and the sown, and though its streets ran at right angles there was no attempt at the regular grouping

of houses or equal division of *insulae*; a large house stood isolated, surrounded by its own garden and dependances, and next door to it smaller houses were huddled together as best they could find room; when once the streets of the city had been roughly laid out, the individual owner or contractor built to suit his own fancy on an area large or small as his means allowed. But in the village it is otherwise. Here we have town-planning in its most radical form, with complete uniformity as its guiding principle. The village is a perfect square, enclosed within its own walls; it is divided by streets which run through it north by south at equal intervals, connected by cross-roads at either end; with the exception of one house, presumably that of the foreman or clerk of the works, all the houses are equal in size and similar in character and accommodation.

The architect took as his unit a square of 10 m. (=20 cubits), which formed the ground area of two houses: on this basis it was easy to make the whole into a square, widening the front road or adding an extra block lengthways to balance the space given up to streets.

Here, as at el-Lâhûn, the square is divided by a heavy wall going north by south into two unequal parts, an eastern or inner part consisting of four rows of houses and four streets, and a western or outer part consisting of two rows of houses and a single street. Each had originally one gateway through the south wall. The enceinte walls (0·75 to 0·80 m. thick) were built first. The bricks of which they are constructed measure 0·33 by 0·10 m., and are of a distinct make from those in the houses, being of a greyer colour and full of lime chips. The bonding of the enceinte wall shows that the inner village with the dividing wall was constructed first, the outer village merely abutting on it; this does not denote any real difference in date, it was but a matter of the builder's convenience, but to it apparently was due the awkward placing of the village. The architect had planned a square which would just fit into the hollow; but the builder started by putting up an oblong, and chose to place it in the middle of his available flat space; consequently, when he came to add his western quarter he was out of his reckonings and had to build on the slope of the valley side and so spoil the plan; actually one house-plot was taken up by a spur of rock and could not be built on at all.

After the enceinte wall was complete the builders set to work on the houses, starting with those at the south end of the streets and working northwards house by house; when they had an enceinte wall to build against, they merely had to construct a series of L's. In Main Street and Gate Street they sometimes put up the three walls of the individual house, sometimes ran straight ahead with the back wall and abutted L's into the angle between it and the house last completed. Internal partition walls were built later, and do not bond into the outer house-walls.

It is interesting to compare this village with the town built to accommodate the officials and workmen employed on the pyramid of Sesostris II at el-Lâhûn (PETRIE, *Illahun, Kahun and Gurob*, pp. 7 ff.). In each case we find the great rectangular enclosure, the division into two unequal parts, an eastern and a western, the regular lay-out of the streets and houses, and the conformity of the houses themselves to a limited number of well-defined types. But in the XIIth Dynasty town the architect who planned the whole has catered for different classes: there is a royal (?) lodging-house on the acropolis, there are larger buildings for the higher officials, and there are storehouses and magazines, as well as the cottages of the

actual workmen. Moreover, none of these are of the el-'Amarneh type. The workmen's houses, with which alone we have to deal here, do indeed possess four or five rooms apiece and a staircase leading to the roof; but the ground-plans are very far from being uniform, and none show the features characteristic of our XVIIIth Dynasty settlement. Between the two periods Egyptian domestic architecture had undergone a very radical change.

No less radical a difference will be seen when we turn to the village found by the Metropolitan Museum expedition at Lisht.<sup>1</sup> There we have the typical Egyptian village such as exists to-day, a mere huddle of houses, run up without any general plan, a thing of gradual growth with fresh houses built on the ruins of the old, all differing in size and in arrangement: it is the individualism of the peasant as opposed to the carefully worked out scheme of the town-planner. Both this contrast and the general resemblance in the case of el-Lâhûn confirm the theory that the inhabitants of our settlement were workmen employed on a definite piece of government work.

#### THE STREETS.

The inner village is entered from the south by a narrow gate (Pl. XVII, fig. 2) in the centre of the south wall, a gate furnished with a door whose wooden pivot-block was found *in situ* let into the stone threshold (Pl. XVIII, fig. 1). This led on to a broad street or square running across the ends of three rows of houses and closed at its east end by the big house of the overseer; out of it four straight and parallel streets go north, dividing the rows of houses, each having doors all along one side and a blank wall along the other: at their far ends they are joined again by a narrow lane, North Passage, which runs under the *enceinte* wall and has no houses opening on to it. In the outer village a single street, West Street, runs up the centre with houses opening on to it on both sides; this street communicates with South Place by a broad doorway through the long dividing wall, and originally had its own exit through a second gate in the south wall, but in course of time this fell into disuse. It had been an inconvenient gate at the best, opening on to a rough sloping rock. It was long the custom to use the open space between the gates as a place where the flocks of the village might be kept at night, and in time, what with their droppings and the chopped-straw waste that accumulated there, the ground-level rose and began to block the doorway. Most people went round to the other gate by preference. Then the population dwindled, and the outer village was the first to be deserted, so, since there were now few to use the gate, it was roughly bricked up and a breast-high wall of uncut stones was thrown up anglewise between the buttress-end of the Long Wall and the southernmost house of West Street, to form a regular pen: the cattle stayed on there, and rubbish was flung into the empty space, until the whole south-west corner of the village became the midden we found it to be when we came to dig there.

South Place, on the other hand, stretching in front of what came to be the only entrance to the village, was never blocked up. The only thing in it was a little shrine (?) against the east jamb of the gateway; it was in too ruined a state, when found, for its original character

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<sup>1</sup> *Bull. Metropol. Mus. of Art*, Nov. 1921, Part II, pp. 12-13; Dec. 1922, Part II, pp. 13 ff.

to be made out; all that remained was a simple enclosure with in front of it a miniature flight of stone steps, which looks right up Gate Street.

But if South Place was unencumbered, that is more than can be said of the other streets. Private householders did not hesitate to encroach on the public way with actual building construction. Thus the owners of several houses in Main Street built out from their front rooms small covered tunnels whose roofs made very awkward bumps in the road-level; others let into the ground against the wall big stone bowls surrounded with a mud coping whereon stood the great jars holding the household water-supply, or they built brick mangers against the wall and kept their cows or donkeys there: one can see, built into the brick-work of the manger, the cross-stick with the tethering-rope still fast about it. (*J.E.A.*, VIII, Pl. IX. The water-jar seen in the background was found there in position.) The streets must have looked very much like those of a small town in modern Egypt. The resemblance was increased by another feature, perhaps more common than the surviving evidence goes to prove. Outside No. 5 Main Street there lay deep down in the débris a layer of light brushwood with rough beams below, but lacking the mud coating which is necessary to a house-roof; it lay quite horizontally and not as it would have done had it slipped from the house-top: it was evidently a light awning such as in the modern market is often stretched across the road to give shelter from the sun.

Another glimpse into the street-life of the place was given by the presence at various heights in the long blank walls facing the house-doors of holes clearly intended for, or made by, wooden pegs, some of which were actually found fallen to the ground beneath. The purpose of these pegs is shown by the wonderful wooden models found at Der-el-Bahri by the American excavators in 1920, wherein women engaged in spinning are seen winding the thread off the spindles on to pegs fixed in the wall of the weaving-room.<sup>1</sup> In many Egyptian villages this is still done to-day. In modern villages too the long hanks of thread taken from the dye-vat are hung to dry out in the street on pegs driven into a blank wall, and here too we may apply the analogy of the present to the past.

There was no attempt at external decoration—that was not to be expected; the street walls were seldom mud-plastered, and even then there is no trace of whitewash, and as a rule the brickwork was left exposed. The only possible exception is in North Passage; here, immediately opposite the end of Gate Street, an oval niche is cut into the wall 0·70 m. above ground level; it is 0·55 m. high by 0·35 m. wide and 0·40 m. deep, completely mud-plastered. This may be merely another type of manger, but it is tempting to see in it a recess either for an ikon, facing the shrine by the south gate, or for a lamp, visible all the way down the street, or perhaps for a combination of the two.

#### THE HOUSES.

The type of house is simple. Each has a frontage of five metres and a depth of ten, and on the ground-floor is divided, from front to back, by two cross walls running north by south, into three unequal parts, of which the rear section again is divided into two parts

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<sup>1</sup> Similar peg-holes and pegs were found inside some of the houses, in the front halls and in the living-rooms.

by a wall running east by west. There are thus four rooms. First is the entrance-hall, with door on to the street; then, in the middle, the main living- and reception-room; of the two small rooms behind, one is always a bedroom,<sup>1</sup> the other a staircase, a kitchen, or both combined. The fact is that the houses are inadequate. There had to be a staircase, and the architect had not allowed for this in his ground plan. Either then the kitchen and staircase had to be crowded together into one small closet, in which case you had to climb over the bottom step to get at your bread-oven, and could hardly go upstairs without bumping against the fireplace, or the room had to be given up wholly to one or the other, and then space had to be sacrificed in the entrance-hall for stairs or kitchen as the case might be. This necessity produces almost the only real difference that disturbs the monotony of the house plans, and in the detailed description of the houses we differentiate between Type A, where the staircase is in the back chamber, and Type B, where it is in the front hall. Sometimes one end of the hall is partitioned off by a coping or low screen of brick behind which are the stove and other domestic fittings; but the general disposition of the house is but little altered, and the allowance of four rooms to the ground floor is exceeded only in the one case of the foreman's house at No. 1 East Street.

The stairs led up on to the roof, which was always flat. Judging by the thinness of the walls we concluded that the houses were of one storey only, and this is probably true in the main, and from a constructional point of view. The flat roof plays so important a part in the life of the modern native that a staircase which leads up to nothing but the roof is no anomaly; but just as in a village of Lower Egypt to-day one sees on the roofs shelters built up out of old packing-cases and paraffin tins, so in ancient Egypt it is likely enough that there were on the roofs light structures of poles and thatching or of trellis-work, perhaps of mud and wattle, in which the women at work took refuge from the sun. Occasionally these superstructures were of a more ambitious sort; thus the householder at No. 9 Main Street had, apparently, above his bedroom, a small *harim*-chamber, which, though it must have been for the most part flimsy enough, yet boasted a doorway, or false door round a niche, of brickwork gaily adorned with frescoes; similar but less remarkable remains were found, e.g. at No. 11 Long Wall Street, where the painted plaster had been not on brickwork, but on pole-and-lath work such as must have been the more common material for these roof-buildings. Two other houses (No. 20 West Street, No. 1 Main Street) produced evidence for upper chambers, and probably there was generally something of the sort; it is only natural that they should perish and leave little trace. But the presence or the character of an upper chamber did not much concern the architect, it was not allowed for in the plan, and it was at best an unsubstantial addition to the flat roof which was essential and invariable. On the roof, whether they had a painted lattice chamber or a piece of matting on three poles to sit under, or nothing at all, the women certainly spent much of their time and did much of their work: pots and spindles and toys were always being found mixed up with the rubbish fallen from above and often lay definitely on the top of the roof debris.

Calculations based on the stair flights show that the front rooms stood originally about 2·30 m. high. A palm column-shaft found in No. 1 East Street measures 2·10 m. To-day

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<sup>1</sup> See later, p. 63.

the walls seldom remain to a height of more than 1·80 m., and even then show no signs of windows. This is to be expected; in Egypt very small windows suffice to give light and large ones let in too much dust; they serve their purpose better if put high up, and they must be high up to secure the privacy which the East demands.<sup>1</sup> The entrance hall then probably had one, or at the most two, small and narrow openings close under the roof: the living-room must have been rather more lofty, and was lighted by windows still higher up, looking out perhaps both to front and back over the flat tops of the other rooms. The bedroom probably had no window at all; no modern peasant would think such essential, and his predecessor of the fourteenth century B.C. was not likely to be more hygienic. The kitchen at the back must have had a hole in the roof to let out smoke as well as to let in a little light; some (*cf.* No. 11 Main Street) were not properly roofed at all, but were merely covered with a pile of light brushwood and straw heaped over rough beams, which kept out the sun and served as fuel when wanted; the same custom holds good to-day.

#### BUILDING MATERIALS AND METHODS.

The houses are built of mud bricks, sun-dried, with an occasional use of rough rubble in the foundations and lower courses. Cut stone is employed fairly often for thresholds, and in two houses the door of the living-room was furnished with ashlar jambs topped, in one case, by a rough cavetto cornice; but stone walls never occur.

The average thickness of the main walls is 0·35 m., but party walls may be thinner and those of less importance are often but screens one brick, *i.e.*, 13 cm. thick. The *enceinte* wall of the village has a thickness of 0·75 m., but when a house was built up against it its thickness seemed to the householder so excessive that he often cut part of it away to form a cupboard or to enlarge his room. The thinness of these mud-brick walls is in itself sufficient proof that there was no proper second storey, and that such superstructures as did exist were of the lightest description.

The roofs were of the kind normal in the East to-day. The main beams—rough poles, usually quite thin—were laid close to each other, often nearly touching, never more than

0·15 m. apart. In the most complete type of roofing (*e.g.* No. 11 East Street; Fig. 6), long straight sticks are laid side by side over the beams, at right angles to them: over the sticks reeds, twigs or palm-leaves are laid crosswise to form a layer, when compressed, 1 or 2 cm. thick, and on the top of these is put the earth and mud plaster, which may be of any thickness from 0·10 m. to 0·25 m., and of course grows with repairs. A simpler roof was made by laying coarse matting over the beams and putting the earth directly on this (Pl. XVIII, fig. 6, shows both matting and its impression on the earth above it): the result is that the mats sag between the beams and (in practice) a good deal of dirt filters through when



Fig. 6. Section of roofing: No. 11 East Street.

coarse matting over the beams and putting the earth directly on this (Pl. XVIII, fig. 6, shows both matting and its impression on the earth above it): the result is that the mats sag between the beams and (in practice) a good deal of dirt filters through when

<sup>1</sup> Cf. the stone windows from the main city site, p. 41.

people walk on the roof. A better roof is obtained if brushwood is laid over the matting. All kinds of matting were employed—there is no rule in such things—and all kinds were found by us in a remarkable state of preservation (see Pl. XX, fig. 4 and *J.E.A.*, VII, Pl. XXVII, 1). Probably in these poor houses there was no attempt to conceal the beams and matting by means of a ceiling plaster; we did find such in the tomb-chapels outside the village, and painted ceilings certainly existed in the palace and in the richer houses of the city; but here no signs of anything of the sort were detected by us.

The span of the roofs is considerable, in the living-room at any rate, too great for the slight poles employed if the roof was to be used for walking and working on, and a central support was a necessity. In the whole area dug we only once (in No. 21 West Street) found a stone column, a limestone shaft painted red which had rested on a solid and well-fashioned stone base; but in many houses there was a circular flat stone with a roughened disk on its upper surface, whereon must have stood a simple wooden post. In one case (No. 1 East Street) the post itself had survived: it was a stout palm-tree trunk plastered with mud, 2·10 m. long, with its upper end cut square and notched to take cross-beams; probably this was the normal type of column. In the back rooms, with their much smaller roof-span, no such support was needed. No evidence for any was found in the front halls; that the front roofs were used is shown by the fact that the stairs often lead directly on to them, and the span, though generally rather smaller than that of the living-room, was still considerable, and would seem to require a support, but if any did exist the post must have rested on the bare ground without any stone base and has therefore left no trace of itself. It must be borne in mind that nearly all the heavy timber, being very valuable, was removed when the village was evacuated, and that its absence cannot be taken as evidence; only light timber and brushwood, which could hardly be re-used, were left behind.

The stairs were of mud brick. Treads average 0·30 m. in depth and steps 0·20 m. in height. The stairs either run in a straight continuous flight (when the staircase is cut out from the front hall), or turn round a brick pillar (when the staircase is in the back room). In two cases (Nos. 20 and 22 West Street) the lowest flight was built over a series of roughly constructed brick arches, a half-brick on edge being used as a keystone between sloped bricks; but as a general rule the lowest flight of a turning staircase or the first five treads of a straight staircase rest on a solid mass of brickwork filled in with sand and rubble. Above this a row of poles were laid on a slant, their lower ends embedded in the top course of the supporting brick mass and kept in position by stones wedged between them, their upper ends stuck into holes cut in the wall of the stair chamber: on them rested the brick treads of the next flight, and under them was a cupboard. In one or two instances the same method was used for the lowest flight also, the poles supplementing the rubble filling, and in one of these the wood was unusually well preserved (Pl. XVII, fig. 4; and *J.E.A.*, VIII, Pl. VIII); but what was an exception for the lowest flight was the invariable rule for the upper, and though the beams had nearly always vanished the traces of them in the walls were often discernible.

Door-sills were often of stone, occasionally ashlar, more often roughly split blocks, sometimes mere boulders; sometimes they were of wood, but the majority were of plain mud brick. The frames, with the two exceptions noted above, were of wood. The jambs were

made fast by pegs driven into the brick door-cases, and where there was a stone sill were let into slots cut in it, or failing this they might be set in small slotted stone blocks built into the brick threshold. In nearly all the houses were found small impost stones in the shape of truncated cones (Pl. XIV, fig. 2, r.); they were often near the doors and in one case a pair were found in position, one against either jamb; and it is possible that the door-frame rested on these.<sup>1</sup> The wooden door turned on pivot hinges revolving in wooden sockets let into the stone or brickwork of the sill (Pl. XVIII, fig. 1); it had a sliding latch worked from the outside by a string, and was made fast at night by a heavy bar dropped into sockets cut in the brick of the door-case.

#### DECORATION.

Coloured wall decoration, which is so characteristic of the rich houses in the city, was naturally less common in the village, and even so belonged almost entirely to an early period in its history. As the original frescoes grew shabby and the villagers poorer, too poor to have them replaced, they were covered up first with a coat of whitewash and later, as that in its turn needed repair, with one or more coats of plain mud plaster. The painting seems generally to have taken the form of panels starting about 0·20 m. above floor level: consequently when the houses were deserted and fell in, while the lower parts of the walls were protected by the débris, the painted upper parts were exposed to the action of wind and rain, and the plaster, together with the colour on it, flaked away and left bare walls. It was but rarely therefore that traces of frescoes were found, and then only the lower parts survived, and in a wretched state; coat after coat of whitewash or mud laid over the already damaged paint had to be picked off bit by bit, too often bringing the paint away with it, so that it was very difficult to recognise much of the original design. But one may fairly assume that colour was far more freely used than the present state of the walls would seem to show; the workmen who so lavishly decorated the tomb-chapels were sure to keep back some of the paint to beautify their own homes, and the disappearance of their work is only the natural result of circumstances.

At a later period another type of decoration was employed, rough monochrome sketches in black on the whitewashed walls or in white on the plain mud plastering; paint seems to have run out, and we have a cheap substitute which itself was soon to die out and to give place to mud unadorned.

In one instance, No. 7 Long Wall Street, a sketch is found on the wall of the entrance hall, but generally decoration discovered *in situ* is reserved for the living-room, as indeed is natural enough; other ground-floor rooms were whitewashed or simply mud-plastered. But in several houses we found high up in the filling, and in the case of the best example (No. 10 Main Street) lying definitely above the débris of the roof, remains of coloured work which assuredly did not belong to the rooms in which they happened to have fallen; they must have come from a *harîm*-chamber on the house-top, of a more than usually ambitious type, adorned with jambs or pilasters of painted brick. Our best piece (Pl. IX, fig. 2), is

<sup>1</sup> The German excavators suggest that such stones were used to support the legs of chairs and beds (*M.D.O.G.*, 46, pp. 25–26); they may have served more than one purpose.

very much in the style of the shrine paintings; the pilaster seems to have helped to frame a panel in which there was an inscription in black on a yellow ground and a polychrome design with a human figure, probably a scene of Aten-worship. The frescoes of the ground-floor rooms show generally only borders of lotus leaves, chevrons or circles, these also in the shrine manner: one (in No. 2 Main Street) contained figures of Bes (Pl. XVIII, fig. 3). The later monochrome sketches give in two cases rows of Bes figures, in one a row of human (?) figures alternately large and small.

#### THE ROOMS.

1. *The Front Hall.*—The street door of a house led straight into the front hall or outer room, which measured about five metres across by two or two and a half metres deep and had in its far side a door giving on to the living-room. It was essentially a “general utility” room. Sometimes, undoubtedly, it was shared with the smaller cattle; a manger against one wall is a common feature, and tethering-stones were occasionally found, *e.g.* in No. 26 West Street, while the rough stone troughs which often occurred in the outer rooms were probably for watering the animals; in a few cases there is found in one corner a patch of flooring strengthened by having large boulders let into it, and this seems to have been the place where the beasts were tied up: when the north part of the room was cut off for a staircase, the cupboard under the stairs was always found to contain a litter of chopped straw and a little grain, so that generally we can take this to be the store of fodder for the animals in the main room; but in some cases, *e.g.* No. 12 Main Street, the presence of a manger in the cupboard itself shows that they might be moved into here out of the way. Indeed, while allowing for the principal herds being penned in the south-west corner of the village and for an occasional cow or donkey being tied up for the night outside the front door, we can safely say that more often than not a man’s beasts shared his house with him. But they were confined to the hall. Only once, at 11 Main Street, was there proof of animals being kept in the living-room; here there was a brick manger against the south wall, and in front of it, embedded in the floor, a naturally-pierced boulder with the tethering-rope still fast through the hole; but the case is so exceptional that one suspects a pet goat! The only other exception was in No. 3 Main Street; the family were the proud possessors of a horse, and were so nervous for its safety that they kept it, rather straitly confined, in the little cupboard under the back stairs. There were probably very few horses in the village.<sup>1</sup>

In other cases the front hall was a workshop. In four of the houses in Main Street there was in the front wall, at or just above floor level, a square hole continued by a covered trench some two metres long running under the street; in apparent connection with this (see especially No. 8) there were square stones slotted to hold the ends of horizontal beams, one standing just in front of the hole, the other immediately opposite to it against the east wall; it looked as if a heavy beam had rested in these with a prolongation beyond the house wall. Such stones occurred in a good many houses where there was no hole

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<sup>1</sup> Possibly we have misinterpreted the evidence; but who would make such a fuss about a donkey?

in the wall, not always in front rooms—but as they might be found high up in the filling there was nothing to show their original position—and nearly always in pairs. We suspect them to be sockets for the bed-beam of an upright loom.

Even without conclusive evidence, weaving is so likely to have been practised in the village that our explanation of the socketed stones, etc., might well have been allowed to stand: but in No. 3 Main Street there were found, in conjunction with a pair of these, fragments of wood possibly belonging to the loom itself, and one at least as to which there was no doubt, part of a "warp-spacer" used for keeping the threads of the warp in position during the process of warping. In a good many houses, too, we found slightly curved dagger-shaped sticks (Pl. XXII, fig. 1, top) technically known as "beaters-in." Perhaps connected with the same industry—but with the spinning rather than the weaving stage—are the pottery bowls with two internal handles (Type XIII, Pl. XLVIII): these may be merely pot-covers, but they may also be reproductions in clay of the stone form 22/591 (from the main city) which we know to have been used for spinning, a thread being drawn up through each loop from the raw material heaped in the bowl.

Not uncommon in the front hall were square hearths or open fire-places quite distinct from the ordinary cooking hearths. They were built just like the mangers and sometimes could only be distinguished from those by the presence of ashes on them or by the blackening of the wall above; quite possibly the uses were alternate! With them one might connect the clay crucibles so common on the site; there was nothing to show what was melted in them, but they must represent some kind of industry; as limestone moulds for jewellery were found, they may give the required explanation. Parts of bronze drills worked with a bow, unfinished stone finger rings, the core of a tube-bored alabaster vase, and the stone table on which the stone-cutter worked, covered with drill-marks, spoke of other minor trades carried on in the village and probably for the most part in the front halls; paint-brushes and a stick covered with modelling-wax (*cf. BORCHARDT, Smithsonian Report for 1915, p. 453*) might be connected with work on the tomb-chapels. Only in one case did we find evidence of a regular workshop; the owner of No. 13 West Street took advantage of the fact that the building-lot north of his house was left vacant owing to the nature of the ground, and used it as a factory; at least we found there a furnace of a type not met with elsewhere and crucibles and drill-cores which seemed to witness to a more professional trade than was carried on in the houses. In the hall, too, the men would keep their larger tools—pick and winnowing fan and adze, chopping-block and pestle. When the small room at the back was monopolised by the staircase, the front room had to serve as kitchen also, and then we find one end of it partitioned off by a low mud screen, behind which are all the necessaries for cooking and bread-making. If one looks into the front of a Greek cottage in Ouchak or any western Anatolian town, one gets very much the effect that would have been given by one of these el-'Amarneh houses when the village was still alive: there is the carpet-loom blocking up half the space, the goat tethered against the wall, and bread being made in the corner, while close to the door itself the good-man may be mending shoes.

2. *The Living-Room.*—The amenities of life were first met with when one entered the reception room. If the entrance halls of the various houses differed a good deal, custom imposed a respectable uniformity upon the room where one dined and received one's friends.

The room, as we have seen, was loftier, and its roof was supported by a post or posts, even by the dignity of a column; its walls might be decorated with frescoes. Along one or two of its sides ran a divan, a low platform 0·10 to 0·20 m. high, of mud brick, on which would be spread matting and perhaps rugs or cushions. Conveniently close to this was the hearth, generally a shallow pottery bowl set in a ring of mud which on one side projected to form a flat hob for the food vessel. Somewhere or other against the wall was the water-supply so necessary for ablutions as well as for drinking; the great round-bottomed jar stood in a ring-base of pottery or of stone, roughly hour-glass shaped, and this might simply be set upon the ground or might stand in a shallow stone bath; the bath was either solid or had a drain-hole leading to a pot buried rim-deep in the floor, for the big jars were porous and there was no point in letting run to waste water that had to be carried from so far. A very common feature in the living-room is a pot buried in this way, and at first

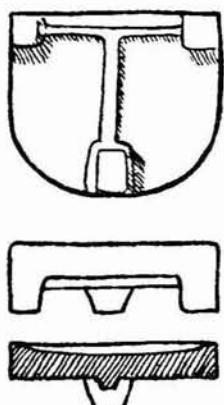


Fig. 7. Limestone seat: view from beneath and sections.  
Scale  $\frac{1}{10}$ .

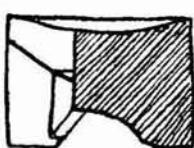


Fig. 8. Limestone seat: view from beneath and sections. Scale  $\frac{1}{10}$ .

we regarded all as store-vessels, which indeed they often must be; but on second thoughts it seemed probable that these too served often as stands for the water-pitchers. Other big jars might be set about the room, either on ring-stands or let into the ground, just deep enough to keep them steady (for most are round-bottomed), or buried to the rim in the floor; they would serve various purposes, the storing of food-stuffs in current use being the most probable.

Of other furniture, the room boasted a certain number of stools and tables. Rarely the stool was of wood, four-legged and low, with a cane or string seat; more commonly it was of stone. The usual type of stone stool was three-legged and semicircular, the top neatly hollowed to give comfort to the sitter (Figs. 7 and 8, and Pl. XIV, figs. 6 and 8); poorer examples were solid to the ground: occasionally they were square with curved seats (Fig. 9). The table was often but a disk of stone five to ten centimetres thick, cut roughly round the edges but smoothly polished on top: the under side was left rough and slightly convex and must have been let into the floor, though none was found by us in position.

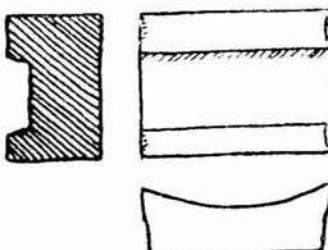
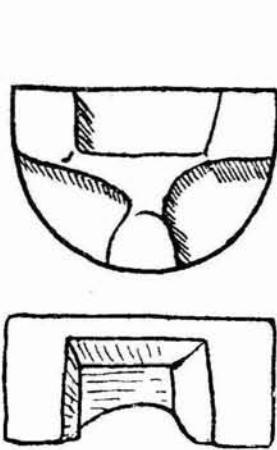


Fig. 9. Limestone seat: view from beneath and sections.  
Scale  $\frac{1}{10}$ .

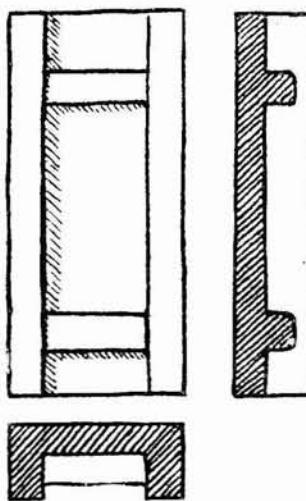


Fig. 10. Limestone table: view from beneath and sections. Scale  $\frac{1}{10}$ .

Both stools and tables proved remarkably useful to the excavators at lunch-time. Another form of stone table (Fig. 10) was rectangular; the top was smooth (so smooth that one suspected people of the bad habit of sitting on the table), and the under side was hollowed out so as to leave outstanding only two narrow ridges along the sides and a couple of cross-bars; probably this was to give a smaller bearing surface and so to secure greater steadiness on a floor often none too even. In the photograph on Pl. XVII, fig. 3, showing the reception-room of No. 8 Main Street, the workman is seated on a semicircular stool before the hearth, on which is burning some of the original wood and charcoal used in the village fireplaces, a food bowl stands on the stone table on the divan, where such tables were often found, and the water-jar has been replaced on its ring-stand in the bath in the corner.

At night the room was lit by lamps either standing on the floor or set in small niches cut in the wall about a metre up from the ground, or on a bracket made by the simple expedient of driving two pegs side by side into the mud brick and plastering them over with a daub of mud rounded off in front. The lamps had no very distinctive shapes, but were saucers (Types 1002–1004) filled with oil or fat with a wick stuck into it. At night the divans presumably served as beds for members of the household not provided for elsewhere.

*3. The Bedroom.*—The purpose for which these rooms were used is not very clear, and if we call them “bedrooms” it is with a certain reserve. In three cases (Main Street 6, 7, 9) there were sleeper-walls, such as in the houses of the main city characterise store-rooms, being the supports for wooden shelves: in one or two cases (No. 9 Long Wall Street, No. 20 West Street) pot-holes or jar-stands occur, which seem more in place in a store-room than in a bed-chamber. Moreover, the lack of store-rooms is one of the peculiar features of the village, and if these back rooms with their generally unplastered walls, ill-made floors and lack of light be identified as store-rooms, then a difficulty is solved. But the characteristic store of the city site is a brick-lined bin or circular pit, the regular grain-repository of the East, ancient and modern, and a mere cupboard or closet does not replace this or lessen the difference between city and village. Again, the bedroom is an even more regular feature of the city house than is the granary, and its absence from the village house would be hardly less striking. The room identified, rightly or wrongly, as a bedroom in the main town is characterised by a slight recess filled by a low platform on which the bed stood. The village rooms with which we have to deal have no recess, but one side of the floor is often better made than the other, and in some cases (*e.g.* Main Street, No. 7, 8; Long Wall Street, No. 9) there is a regular raised platform. The “shelf-supports” may have supported beds quite as well as shelves, supposing the bed to have been a wooden frame without legs, and the space beneath would have served for boxes containing household linen or spare clothes. The only wooden bed found was not in a room at all, but in the street, outside the front door of Main Street No. 3; it is the usual ‘*angarib* consisting of a wooden frame with twisted rush mattress: probably there were many such in the village, but they were carried off when it was evacuated: a fragment of a wooden head-rest was found in No. 12 Main Street. The lamp-niches in the walls, which were not uncommon (*e.g.* No. 9 Main Street), would be more fitting in a bedroom than in a store-cupboard. On the whole, it seems probable that these rooms were bedrooms: that they should have been used for other purposes as well, *e.g.* the storing of clothes, etc., is natural enough; but they were not granaries.

4. *The Kitchen.*—Though cooking was fairly often done in the front room, yet in a well-ordered house one of the small rooms at the back was in part or, if not encumbered by the staircase, wholly, devoted to the making and cooking of food. Of the kitchen pure and simple, the most complete example was afforded by No. 10 East Street, and a detailed account of this will serve to describe all (*cf.* also *J.E.A.*, VII, Pl. XXVII, 2).

In the south-east corner is the bread-making area, separated from the rest of the room by a low coping of plastered brick, the floor inside being carefully mud-plastered, Pl. XVII, fig. 6. Into the floor is let a mortar of hard white limestone, used for bruising wheat (*burghul*) for porridge, and for grinding hard grains; on a cloth laid on the floor the grain would be spread out after washing and sifting to be picked over, and the dough would be made and kneaded. Next to this, against the south wall, is a shallow open bin 0·10 m. deep, perhaps to hold the grain ready for immediate use, while the big bin beyond it, 0·65 m. deep, would contain the main supply. Another bin, 0·75 m. high, occupied the north-west corner of the room. Next to this was an open hearth consisting of an open ended trough for burning wood, then a solid brick hob, and then a small box-hearth for charcoal. In the north-east corner was the cylindrical oven made of a big thick-walled pot heavily plastered round with mud and with a small draught-hole at the base and an open top intended to be closed by a clay lid. A fire was lit in this and the mass of clay and brick was well calculated to retain the heat; the dough was put into a platter, flat-based with low vertical sides (Pl. XLVI, Type III/1020), which was originally of unbaked clay and was itself baked with the bread (we find examples showing all stages of firing, and the same practice holds good in the neighbourhood to-day); the loaves were left in the warm kitchen or stood in the sun for the yeast to work, and when they had risen enough they were put into the oven, saucer and all, without the trouble being taken of drawing the ashes. After being baked, the loaves were taken out and put together into a deep basket (Pl. XXI, fig. 2), so that they should not give off their heat too rapidly and become heavy: this practice also is in use to-day. In the corner of the kitchen of No. 12 Gate Street there lay, under a pot-base, a store of unused fuel, chiefly straw and sheep-dung, the latter of which is still commonly used as fuel and is said to retain a glow longer than any other. Charcoal, too, was employed, and we found plenty in the ovens and in the cupboards under the stairs; wood was also used, and there was some evidence for cakes of cow-dung, but it was not conclusive.

A common form of hearth was the box-hearth, a shallow square trough on a high base of solid brickwork: it was often very hard to distinguish from a manger, and the blackening of the wall above was perhaps the only proof of its character. Sometimes a hearth so constructed was vaulted over in brick and so transformed into a baking-oven, more like the army field-bakery. More difficult to explain are the structures built like a box-hearth, but lime-washed or lime-plastered above, and generally having a low lime-plastered bin next to them: or on one solid brick base there may be two shallow oval hollows, lime-washed, with a sort of hole between (*cf.* Fig. 11, p. 77). In one or two cases signs of burning above showed that these too had served as fireplaces; in other cases there were no such traces, and the use remained doubtful: they cannot have been mixing-tables for dough, for the lime is not waterproof: perhaps they were merely sideboards.

The stone mortars were of precisely the same shape as the stone bowls, also let into the floor,

whereon the water-jars stood ; the only difference was that whereas the mortars were smooth at the bottom and the upper part of their sides might be comparatively rough, the jar-stands were worn smooth round the rim and were rough at the bottom. With the mortars were used big club-shaped pestles of hard wood, as much as 0·95 m. long (Pl. XIX, fig. 1). In our photograph (Pl. XVII, fig. 5) a man is shown using the original pestle in the mortar beside which it was found (it happens to be in a cooking department in a front hall, not in a kitchen proper) ; the small girl is working with a hand grinder on a saddle quern of hard granite, the other child is sweeping the floor with a broom of the period—which is identical with that of the present day.

The ordinary cooking-pot was a round-bottomed and round-bellied *marmite*, with low straight rim and wide mouth, made of thin hard-baked clay, Pl. LII, Type XLVI/1035. Amphorae for carrying and keeping liquids were generally of a porous greenish ware. Shallow bowls of coarse clay were the commonest of all types after the big store-jars ; doubtless they were the food dishes of every-day use. Painted pottery, common in the city houses, was rare in those of the village, but we did find here three of our best specimens—two curious openwork vases (Pl. XLIV, fig. 4), and the handsome handled pot shown on Pl. XLIV, fig. 1, with its black design on a rich burnished red ground. All kinds of baskets were common, and basketwork trays were doubtless used for bread-platters as they are to-day.

When the back room was wholly given up to the staircase it presented no feature of interest other than the cupboard under the stairs, which was often used for storing fodder, but in other cases produced remains of *dōm*-palm nuts, dates and grain or husks.

There was one important respect in which the village houses differed widely from those of the city. In Akhetaten even the smaller houses are provided with granaries and store-rooms such as are necessary for people who in the autumn lay in supplies of grain etc. sufficient to keep the household till the next harvest. The same need for brick bins, circular granaries and brick-lined underground stores is felt in the modern village, where the same habits persist, and it is surprising to find in this settlement out in the desert no provision made for keeping food in bulk. Of course here they had no harvests of their own to store, for there was no cultivation, but one might have thought that it would be even more necessary for people dependent on bought supplies to get in their stuff at the season when it was cheapest and to buy largely enough to tide over the winter when prices rise. The only explanation is that the villagers were working men engaged either by a big contractor or by the State, who got their rations regularly and at short intervals and so had no need to take forethought for themselves. If they were engaged in digging the great rock tombs, they certainly were State employees and as such would be provisioned by the King's government ; it is perhaps not without significance that the jar-sealings and graffiti found in the houses refer to wine of the House of Aten from the royal vineyards, or even that one jar-sealing bears the written name of Pawah, the name of the high priest of Aten in the sacred city.

#### RELIGION.

There was but little left in the ruins to mark the religious views of its inhabitants. Naturally they must have been, on the surface at any rate, devout followers of the orthodox Aten worship, but there can be little doubt that with poor working men the traditional

beliefs—or rather superstitions—of the past would be scarcely affected by royal prohibitions. The favourite deity was certainly Bes; we found many glazed amulets of that god; and his is the only figure that can be recognised on the wall paintings. The sacred eye of Horus, in the form of a ring-bezel, is equally common; Taurt occurs three times only, on amulets. The head of Hathor appeared as a decorative motive once on a stone bowl, 22/94, Pl. LIV/94, once on the rim of a clay vase, 22/82; a wooden Hathor head (22/73) was probably decorative also, a part of a casket or something of the sort, not a cult object. The only things that did seem to be cult objects were painted clay figurines of uraeus-snakes, which at least had the advantage of not being vetoed by the Aten worship, and, more likely to come under the ban, a rough stone plaque with the ram of Amûn carved in relief (22/139), and a small wooden plaque painted with the Hathor cow (22/154). The small stelae, 22/42, 22/181, are perhaps only commemorative, but the uraeus stela, 22/130, Pl. XXIII, fig. 4, is certainly of a religious nature. Stone offering-tables were common, and one (22/192) has on the back of it a head which certainly has nothing to do with the cult of the Aten.

The “evil eye” superstition seems to be illustrated by a slab of limestone roughly carved in relief with four human hands, Pl. XXIII, fig. 3, top, the most widespread form of prophylactic amulet. A quite common object was a small ball of mud, sometimes stamped with the impressions of signet-rings, containing a wisp of hair: they may have been dedications, a lock of a child’s hair being vowed to a god in the event of his reaching puberty—a practice still current in some districts of Upper Egypt, or they may represent a more malevolent type of domestic magic.

#### CHRONOLOGY.

That the village was contemporary with Akhenaten’s city goes almost without saying: if our view be correct that it was the residence of the workmen employed on the tombs, it is indeed necessary. For internal evidence we have to rely almost entirely on ring-bezels bearing royal cartouches and on wine-jar sealings and labels. It is true that we found one scarab of Amenhotep III (22/98) and one of Thothmes III (22/180); but the first of these was doubtless an heirloom, and scarabs of Thothmes III were made long after the king’s death. Of Akhenaten we found one glazed amulet (22/162) and five ring-bezels, as well as several graffiti on wine-jars; of these, one is dated, doubtfully, to the eighth year of the reign, one to the eleventh, and several to the seventeenth. Three bezels bear the cartouche of Sakerê<sup>c</sup> and no less than nineteen that of Tut’ankhamûn.

It will be observed that the bulk of the dated objects come late in the reign of the heretic king or after its close; but it would be rash to deduce over-much from that fact. Glazed frit rings are fragile and short-lived things of small value, which would soon be broken and thrown away; in the deserted houses one could only expect to find those most recently worn and broken, and so the bezels should be taken as dating the evacuation of the village rather than foundation.

The ruins themselves show that the houses were inhabited long enough to undergo various repairs and to suffer from a steady and long-continued decay. In its early days the place evidently was prosperous, as is proved by the painted decoration of its walls; later on there

is every sign of growing poverty. In Tut'ankhamûn's time, when the decision had been taken to move the court back to Thebes, gallery tombs at Akhetaten must have been at a discount, and the tomb-diggers suffered accordingly. One could not but be struck by the fact that whereas in the eastern quarter all sorts of domestic utensils in wood and wicker were found in nearly every house, and everywhere the rooms were cumbered with fallen roofing material, in the western quarter only broken pottery and small stray objects came to light and not a fragment of wood was discovered. Clearly the western quarter of the place was evacuated first, and wood, being valuable material, was sedulously carried off, the larger cut timbers for new use elsewhere, the boughs and brushwood to be burnt in the houses of the still inhabited eastern quarter; and in view of this it is the more interesting to observe that the western quarter produced as many as nine of the latest dated ring-bezels. It is safe to assume that the place was built in Akhenaten's time: it is certain that by the end of Tut'ankhamûn's reign it was completely deserted.

#### DETAILED DESCRIPTION OF THE STREETS.

##### SOUTH PLACE.

Outside the main gate, Pl. XVII, fig. 2, a paving formed of very rough rounded slabs of limestone. Threshold of a single limestone block into which, against the east jamb, is let in a small wooden block with cup-shaped depression to take the pivot of the door-hinge, Pl. XVIII, fig. 1. On west, a buttress against the south wall forms the jamb of the original gateway to the outer village: the north jamb has been destroyed, together with part of the Long Wall, and the end of the latter has been rudely patched with rubble. The outer doorway in the east annexe has been blocked with stone, and a midden, kept in place by a rough stone barricade, formed over the whole (see p. 54).

By the east jamb of the main gate, remains of a small brick shrine (?); only traces of outer wall remaining, and a flight of three small steps cut out of a single stone.

Against the south walls of Nos. 1 Main Street and 1 Long Wall Street there is a broad footing of rough stones plastered with mud and sloped down to street level.

##### NORTH PASSAGE.

At the junction with East Street, a stone bowl sunk in the ground: a step up with cobble kerb to North Passage proper. Enceinte wall here 2·20 m. high. Opposite the end of Gate Street there is a niche cut 0·70 m. up in face of enceinte wall 0·55 m. high (oval topped) by 0·35 m., mud-plastered inside, with low raised sill along front edge. Too high for a manger, it might be for a lamp (but no sign of smoke), or a shrine to hold a figurine.

*Objects*: Fragment of steatite vase: fragment of inlaid wood, 22/31: wooden jar-stopper: wooden rubber, 22/89: clay model bed, 22/72 (Pl. XXIII, fig. 5), and fragments of second, 22/90: circular mat, 22/91. Outside No. 12 Long Wall Street, two fragments of bronze needles. At end of Long Wall Street, step with cobble kerb.

##### EAST STREET.

Half-way down house No. 12, street level steps down with slight cobble kerb.

*Objects*: Limestone head-rest, 22/57: semicircular tripod stone seat: twig head-ring,

22/56: short string of beads, blue, black and red. Also here fragments of roofing of two sorts, straight reed-matting string-bound, and woven leaf-matting, with mud over, fallen from houses.

Opposite No. 10, stone bowl sunk in ground with stone and mud rim, jar stand and fragment of stone column.

*Objects*: Limestone trough; glaze bezel, B. 4; fragment of blue glaze vase: limestone slab with relief of hands, 22/3, Pl. XXIII, fig. 2, top; roof timber with cross-pinning, 0·90 m. long by 0·25 m. by 0·10 m.

In the street, pots VI/125, XIII/20, XIX/120, XXI/1001.

#### MAIN STREET.

Street level steps down from North Passage with rough stone kerb. Opposite No. 12 a brick manger 0·65 m. high with tethering-peg driven into ground against its north side.

Opposite Nos. 11 and 12. *Objects*: Three socketed stones: black stone rubber: fragment of stone ring; wooden knob, 22/30: bronze ring, 22/49: palm-branch drill-bow, 22/31: circular tray, 22/54: slip-knot in 3-ply rope, 22/32: fragments of stitched leather and of linen cloth.

Opposite No. 10 a square manger 0·70 m. high (0·15 m. deep inside), with recess low down in south face across which a tethering-stick let into the brickwork; south of this, a stone bowl let into ground and originally rimmed with bricks and mud as a jar-stand. *Objects* here: Two limestone offering-tables, 0·15 m. by 0·11 m.; clay crucible. Opposite No. 9, clay uraeus, 22/159: wooden knife-handle, 22/112: wooden door-bolt.

Road then steps down (cobble kerb), the surface made uneven by covered troughs projecting from the houses; opposite No. 8, jar-stand consisting of stone bowl with mud rim 0·40 m. high, and then a rough stone mounting-block (?) in two steps, 0·25 m. and 0·45 m. high: roadway here much encumbered. *Objects* here: Nine wooden spindles: fragments of wooden furniture: five clay crucibles: wooden pounder.

Opposite No. 7, wooden hoe, Pl. XIX, fig. 1, 22/160: clay crucible: ring of black and white glass: Bes amulet, A. 9: here, low in filling, was a quantity of light roofing material (poles, twigs, straw, etc., but no mud), clearly an awning, possibly from a roof structure but more probably from across the street itself.

At the south end of No. 5, level drops again with cobble kerb. Opposite No. 4, jar-stand (stone bowl rimmed with stones and mud) found with jar in position, and brick manger with recess in south side across which the stick and tethering-rope still intact (J.E.A., VIII, Pl. IX).

Found opposite No. 4: Wooden door-bolt, Pl. XIX, fig. 1, 22/147: stick with lump of wax adhering to it, 22/199: fragments of painted wooden box and painted handles: wooden rubber: limestone stela, painted, 22/181: base of basket. Here again was evidence for a light awning over the street. Outside No. 1, a stone mortar let into ground as jar-stand. Pottery from street, VI/134, VI/135, VI/136, XIII/21, XXV/204, XXIX/8, 10, 11, 13, 24, 58, 59, XXXV/1042.

Outside No. 3: Two thick wooden posts up against the west wall (connected with the awning above mentioned?). In the street immediately north of door of No. 3, a bed of usual *angarib* type, Pl. XVIII, fig. 2, found upside down: 153 by 61 cm., and height of

legs 23 cm. Made of beaten *halfa*-grass stretched in a zigzag pattern of wooden frame. Here, too, many spindle-whorls and a wooden object, 21/529, similar to Pl. XIX, fig. 1, bottom, left. Also wooden pegs for winding thread on to in wall opposite No. 3 (see p. 75). In the street here the wooden objects 21/337, Pl. XXII, fig. 1, l.; 21/343, Pl. XXII, fig. 1, second row, r.; 21/344, Pl. XX, fig. 3, fourth from l. (a set-off peg?); 21/399, Pl. XX, fig. 3, bottom, second from r., and 21/513.

#### GATE STREET.

Street level steps down with cobbled kerb from North Passage and again at south corner of No. 12. *Objects*: Fragment of blue glass bezel: fragment of clay figurine, 22/90.

Found outside No. 11: Fragment of a broom or besom, 21/521, wooden leg of bench, trapezoid in form, Pl. XXII, fig. 3, centre, 21/402.

#### LONG WALL STREET.

Road surface stepped down three times with rough stone step-edging.

*Objects*: Opposite No. 7, wooden shoe-pattern, 22/179, Pl. XX, fig. 2: stick with lump of modelling wax, 22/199: opposite Nos. 9 and 10, limestone offering-table, 22/70: two bronze spatulae and needle: wooden box-cover, 22/69, and jar-stopper, 22/67: blue glaze bezel and two beads: lump of green paint: two clay crucibles. Opposite Nos. 11 and 12, blue glaze lentoid bead: bronze stud-head: spindle-whorls: blue glaze bezel, B. 40: glaze Bes amulet, A. 11: wooden weaving-stick, 22/77: sherd with graffito, 22/174: pottery, xxix/56, xxix/57.

#### WEST STREET.

The street here drops at intervals by steps with rough cobble kerbs. A stone trough, rectangular, stood against the wall of No. 26. In front of door of No. 21, an impost stone: outside No. 19, column-section (see house notes). Against wall of No. 15, a stone bowl (jar-stand) let into ground with remains of built stone rim round it: also a rectangular stone trough loose in filling. *Objects* here: Fragments of heavy alabaster pot: broken axe-handle: fragment of wooden comb: wooden toggle: oyster-shells. For the enclosure at south end of street, see p. 54. In the rubbish of the cattle-enclosure was found an oval straw tray and pot, xxi/226.

#### RUBBISH-HEAPS OUTSIDE THE VILLAGE.

These lay south of the wall and to the east of the track from the main gate. They were shallow and showed no recognisable stratification. They were chiefly composed of fragments of pottery and fayence, amongst which occurred bezels 21/543 and 544 (Tut'ankhamûn), hieratic ostraca 21/542, 546, a spool made from a potsherd, Pl. XI, fig. 5, top, l., 21/545, amulets A. 1, A: 2, and a fragment of wooden comb, 22/2.

Also outside the walls, east of the north-east corner of the village, there were found scanty remains of mud-brick construction, built over rubbish, and containing a quantity of burnt ashes and goat dung. The broken walls did not suffice to make a plan. No objects were found.

Outside the east wall of the village was found an ostracon (21/537) dated year 9.<sup>1</sup> This must refer to Akhenaten's reign, but as it may have come from the chapels above it must not be used as a *terminus post quem* for the building of the village.

#### DETAILED DESCRIPTION OF HOUSES.

##### EAST STREET.

###### No. 1.

Much larger than all other houses, and of totally different plan, resembling rather main city types. The four southern rooms are an addition to or later remodelling of the original house, as is shown by the double walls. Particular attention was paid to the pottery from this house, every sherd was noted and over 70 pot-types were identified.

a. *Entrance-Hall*.—Corresponding to loggia in city house. North wall is double, that of this hall being built up against the previously-existing wall of reception-room. In north-east corner a dais 0·15 m. high in which two store-jars sunk level with floor. *Objects*: Column-shaft of palm trunk originally mud-plastered, 2·10 m. long, 0·20 m. diameter; squared roof-beams 1·40 m. long by 0·20 m. by 0·10 m. with morticed and pinned joist-ends projecting from either side; wooden door-socket; glaze Taurt amulet, A. 17; mud seal-impression, 22/189; pot types, VI/1 (or VII/83), XX/1048, XLIII/1015 B, LVI/69, LXXVI/228, LXXX/252.

b. East of this, small room with doors in north, south and west walls, that in the north wall having been bricked up: large jar sunk in floor in south-east corner. *Objects*: two wooden spindles; pot types, VI/1, VI/1007 B, XI/1021, XIII/4, XXI/1001, XXV/1016, XXV/3.

c. In south-east corner of site: walls originally whitewashed, double fireplace in north-west corner, lime-plastered, in south-east corner ashes and marks of fire on wall face. *Objects*: String of small beads.

d. In south-west corner of site, entered from last over threshold 0·17 m. high: rest of east wall only a screen 0·65 m. high. Low curb separates west end. In north wall an original doorway to entrance-hall has been bricked up. In centre of floor a depression, diameter 0·45 m. by 0·25 m. deep, for a stone bowl? Against east wall a low brick coop 0·33 m. by 0·15 m. by 0·11 m. high with entrance in front and hole in top: barley husks inside: perhaps a cage for a small animal? *Objects*: Two stone pounders; plain jar-sealing; pot types, VI/1, XXI/1002.

e. *Reception-room*.—Walls twice mud-plastered with traces of whitewash. Divan 0·12 m. high. Unlined hearth. In north-east corner a rectangular bath built of rubble, originally lime-plastered, later thickly mud-plastered with three shallow depressions for store-jars, the bath clearly having fallen into disuse. South of the bath, two pot-holes in floor. *Objects*: Broken limestone ring; pot types, IV/?, IV/1002 L, XX/15, XX/234, XXV/1016, XLIII/?, and two coarse unrecognisable pots.

f. *Staircase*.—Six treads left (1·15 m.), supported on sloping poles found *in situ*. Below

<sup>1</sup> The reading 9 is practically certain.

in cupboard, *Objects*: Bone roundel, diameter 0·023 m.: fragment of wooden comb; wooden knob, 22/30; spindle; base of reed basket; palm-leaf ring; fragments of shoe leather, some coloured; jar-sealings, plain, and 22/140; clay plumb-bob; a few glass beads; fragments of molten glass; *dôm* nuts; pot types, III/?; IV/138, V/1003 F (or VII/156), VI/1 (four), VI/1007 B, XI/1030, XIII/20, XX/234, XXI/1049, XXV/173, XXXII, XLIII (handles of three), LXXX/252 (one painted, one plain), and others unrecognisable.

g. Room east of reception-room. Walls mud-plastered: stone threshold to room to north (No. 10): pot-hole on west side. *Objects*: Socketed stone; pot types, IV/1002 L (or VI/1), XX/234, LI/157, LXXVI/228, and ? XXIII/1039.

h. *Bedroom*.—Central room on north. Walls mud-plastered with traces of whitewash. Raised recess (0·10 m. high) at east end shows it was bedroom of city type. Later, on the dais and over litter of broken brick and reeds, a bench was built 0·25 m. high and mud-plastered—possibly a hearth. Change probably contemporary with that of bath in reception-room. *Objects*: Brush, 22/194; glaze bezel, B. 43, with cartouche of Akhenaten; wooden box-lid; pot types, III (two), IV/1002 L (or VI/1), IX/242, XXV/202.

k. Room in north-east corner of site. Walls mud-plastered: traces of whitewash on east wall. In south-east corner, plastered and whitewashed trough 0·80 m. high. *Objects*: Pot types, VI/1, XX/15, XXV/1016, XLIII (handle only).

l. Room in north-west corner. Walls mud-plastered with traces of whitewash. Along west wall, a brick-topped "mastaba" 0·60 m. high. *Objects*: Stone offering-table, 22/192; three seal-impressions, 22/193; lumps of green paint; pot types, VI/1, LVI/69 (?), and fragments of five others unrecognisable.

#### No. 10. Type B.

*Front Hall*.—Front door was originally at north end of room: this bricked up and new entrance made at south end of west wall. Walls roughly mud-plastered. Floor in part roughly paved with boulders. Against east wall remains of bin with circular coping-border of stones and mud, 0·15 m. high: next to this a square hearth 0·30 m. high, and north of this a square hob 0·35 m. above bed of hearth.

*Living-room*.—Divan 0·10 to 0·15 m. high. Mud hearth (no basin). A step 0·10 m. high in front of kitchen entrance, which has a threshold 0·40 m. high. Pot sunk in floor near south wall. On divan in north-east corner a large pot, XLIII/117.

*Stairs*.—Four steps of mud and stone preserved, giving height 0·70 m. above divan level. Walls mud-plastered over older whitewash.

*Bedroom*.—Walls roughly mud-plastered: along south wall a footing 0·12 m. high by 0·08 m. wide. *Objects*: Very rough semicircular three-legged limestone seat, height 0·20 m., width 0·35 m.; upper part of large store-jar and fragment of jar type XXI/1001; fragment of clay jar-sealing; blue glaze scarab, 22/17.

*Kitchen*.—Pl. XVII, figs. 5 and 6. See p. 64. Bin in north-west corner 0·70 m. high: oven 0·70 m. high, diameter, 0·37 m. South-west bin 0·65 m. high: partition between this and bread-making area 0·10 m. high. A single-brick division runs north and south across the middle of the room. Floor 0·20 higher than that of living-room. *Objects*: Small fragment of square-sectioned bronze borer, and wooden leg of model chair or bed, 22/4.

## No. 11. Type B.

*Front Hall.*—In north-east corner a brick bin 0·55 m. high. Floor of mud over stones: south-west corner roughly paved with boulders enclosed by semicircular coping of stones: let into the paving, an hour-glass-shaped stone ring-stand, 0·20 m. high by 0·25 m.: a second, 0·20 m. high by 0·16 m. diameter, was found on the mud floor just outside the paved area. The space under the stairs of No. 10 seems to have been used by the owners of No. 11: the south wall of the room is not continuous. Under the stairs was a solid platform 0·30 m. above the paved area, and into it was let a stone trough 0·30 m. long: there was therefore here a recess or cupboard, perhaps used as a manger (?). *Objects:* Blue glaze ring-bezel; wooden spindle-whorl; clay figurine of monkey and young, Pl. XXIII, fig. 1, r., 22/35; also fallen roof material, see p. 57.

*Living-room.*—Divan 0·15 m. high. On the north divan two impost stones apparently in position: on the west divan a stone table and a second in the filling above. Against the south wall one pot-hole and a store-jar sunk flush with the floor. *Objects:* A store-jar (*cf.* xxiii/1039), *circ.* 0·80 m. high; a bronze needle, 22/43; two penannular rings of black and white glass, 22/41; one ditto of clear glass (broken); a blue glaze drop pendant; a fragment of limestone with traces of red colour; and, below floor level against the south jamb of kitchen door, a (broken) limestone stela, Pl. XXIII, fig. 2, 22/42; also pottery fragments of types XIV/106, XXXII, LXXIV/200.

*Stairs.*—Cupboard below. Only one tread left.

*Bedroom.*—Floor 0·15 m. above that of living-room. *Objects:* Blue glaze ring; wooden ear-stud; fragments of store-jar.

*Kitchen.*—Floor originally of hard white cement, later broken and mud-plastered. In north-west corner, hearth 0·35 m. high, cement-coated: between it and west wall a shallow bin cement-lined. The kitchen had been re-arranged and a pot-lined bin, a fireplace and a bread-making enclosure set from west to east along the south wall: these much destroyed. *Objects:* A circular stone table, diameter 0·45 m.; fragment of blue glaze bezel; a limestone rubber.

## No. 12. Type B.

*Front Hall.*—On south jamb of kitchen door clear marks of wooden door-frame, and in north jamb bolt-holes at 0·30 m. and 0·80 m. above sill. South-west corner of room roughly paved with boulders: set amongst these a stone mortar, diameter 0·20 m. by 0·12 m. deep. *Objects:* Socketed stone (for loom ?); rectangular stone trough, sides sloped inwards, 0·40 m. by 0·25 m. by 0·10 m. deep; mortar of hard limestone (22/64), height 0·07 m., diameter 0·13 m., hollow 0·06 m. diameter by 0·04 m. deep; palm-fibre sieve, 22/51; wooden spindle-whorl; wooden Hathor head, from a box (?), Pl. XX, fig. 1, 22/73; blue glaze ring with Horus-eye bezel; fragment of blue and yellow glass vase; fragment of store-jar with lotus stamp, 22/74; pot, XIII/79.

*Living-room.*—Divan against west wall (much destroyed), with ashlar stone edging. Walls originally mud-plastered, then replastered and whitewashed, then refaced with plain mud. Doorway from front hall showed remains of wooden threshold over brickwork 0·10 high. Against north wall a row of four store-jars partly sunk in floor. *Objects:* Blue glaze bezel,

B. 8 (duck and papyrus); fragment of ditto, Horus-eye; blue glaze drop-shaped pendant; small penannular ring; fragments of wooden comb; wooden weaving-stick.

*Staircase*.—Above third stair, window in south wall 0·20 m. above tread and 0·20 m. wide. Cupboard below stairs very roughly stone-paved. *Object*: Saucer, VI/224.

*Bedroom*.—Offset of half brick along south wall. *Objects*: Fragment of blue glaze figurine, nude female; Horus-eye amulet; four small blue beads; fragment of white pebble penannular ring.

*Kitchen*.—In north-east corner oven 1·00 m. high. Against south wall box-hearth 0·30 m. deep with stoke-hole in west side. Charcoal hearth against west wall. *Object*: Fragment of a flat baking-dish.

#### GATE STREET.

No. 11. Type B. (Numbered 501 in 1921.)

*Front Hall*.—Not excavated in 1921.

*Living-room*.—Immediately below the surface were the almost complete remains of the roofing (*J.E.A.*, VII, Pl. XXVII, 1). The bottom layer was of rough tree trunks laid from wall to wall. Above these a layer of twigs laid at right angles to the beams. Next a layer of matting made of *halfa*-grass, *fersi*-reed or palm-fibre; and finally a layer of mud from 5 to 15 cm. thick. Divan to north and east of room. Open hearth in the south-east corner. *Objects*: Wooden peg slotted at one end, Pl. XX, fig. 3, top, r., 21/367; rope ring, Pl. XXI, fig. 2, of outer diameter 36 cm., the core being of palm-fibre wrapped round with cord of the same material, 21/355; fragments of basket of the usual type, cf. Pl. XXI, fig. 2; hour-glass shaped vase-stand of limestone, Pl. XIV, fig. 6, r., 21/532.

*Bedroom*.—*Objects*: Head of female figurine in buff clay, 21/326; upper part of similar figurine, 21/323; fragment of cloth with plaited string fringe at one side, 21/324; limestone figurine of seated ape with basket of fruit, Pl. XIV, fig. 3, middle row, r., 21/321; part of a wooden bowl or scoop, 21/305; fragment of coarse linen; limestone offering tray, Pl. XIV, 5, top, r., 21/263.

*Kitchen*.—Cf. *J.E.A.*, VII, Pl. XXVII, 2, taken from above the south-west corner of the room. In south-east corner the oven with fuel still in position and a charred stick, evidently used as a poker, lying beside the stoke-hole. In the oven and elsewhere were fragments of the shallow platters (type III/1020, Pl. XLVI) used for baking bread. In the north-east corner a mass of fuel (chopped straw and sheep-dung) and a broken water-pot. In the centre of the north wall a pedestal of brick of the usual type with two shallow elliptical depressions in its upper surface, the whole whitewashed. The free portion of the room, namely, the centre and the south-west corner, is divided from the rest by a low wall one brick high with rounded top. *Objects*: Piece of midrib of palm leaf (*gerid*) wrapped round with thread, possibly stump of a brush (Pl. XX, fig. 3, bottom, r. of centre), 21/317; potsherd with hole through which passes a piece of string, Pl. XIV, fig. 3, bottom, l., 21/313; wooden kohl-stick, 21/268; bone polisher, 21/269; alabaster lip-stud, Pl. XIV, fig. 1, r.

Also from this house, 21/370 (Pl. XXII, fig. 3, r.), leg of a bed; 21/320 (Pl. XX, fig. 3, top row, second from r.), wooden object.

*Pottery*: XIII/1001 E, 1002 G, 1002 M, V/1003 C, III/1020 A, 1020 C, 1020 D, XI/1030, II/1034, XXXV/1042, XVII/1044, XVII/1044 A, XXXII/1029 A, XIII/1001 F, X/1058, VI/1060.

No. 12. Type B. (Numbered 502 in 1921.)

*Front Hall*.—Not excavated in 1921.

*Living-room*.—Hearth of usual type in centre of floor. *Objects*: Fragment of wooden mallet, 21/357; slotted piece of wood (from a lock?), Pl. XXII, fig. 1, bottom, centre, 21/356; fragment of alabaster, 21/353; inscribed wooden handle, Pl. XXII, fig. 1, bottom, r. of centre, 21/342; hook-shaped piece of wood, Pl. XXII, fig. 1, bottom, 21/339; fragments of what may have been a yoke, of wood with leather covering, 21/338; oval basket of usual type, Pl. XXI, fig. 2, 21/335; wooden model of a boat, 21/272; fragments of pottery pilgrim-bottle, 21/319; shaped stick with string wound on it, Pl. XX, fig. 3, third from l., 21/318; four small hoops each made of a bent twig bound at the ends with fibre, 21/314; quantity of coarse matting, 21/310; stone with natural hole in which a string is tied, Pl. XIV, fig. 3, bottom, centre.

*Bedroom*.—Clearly used as an ox-stall. In north-east corner a stone trough used as a manger, full of chopped hay, Pl. XVIII, fig. 5. In south-east corner a stout tether-peg driven into floor, Pl. XVIII, fig. 4. Floor covered with cow-dung. *Objects* found: Wooden hairpin, Pl. XX, fig. 3, 21/349; dagger-shaped object of wood, Pl. XXII, fig. 1, top, 21/347; wooden warp-spacer (?), Pl. XX, fig. 3, l., 21/351; small wooden object, Pl. XX, fig. 3, second from l., 21/350; wooden object, Pl. XXII, fig. 1, centre (? shuttle), 21/346; chain bag of palm leaf, Pl. XXII, fig. 4, 21/311.

*Kitchen*.—Not fully excavated in 1921. *Objects*: Painted clay figurine, 21/410; sieve, diameter 21 cm., circular, Pl. XXII, fig. 2, edging of palm fibre bound with palm leaf, mesh with a web of palm fibre crossed by warp of palm leaf, 21/301; fragments of similar sieve, 21/401; fragments of similar sieve, but with raised edges of palm leaf, making it resemble a shallow basket with sieve bottom, 21/405; limestone object, 21/404; steering oar for model boat, 21/400; base of a pointed amphora with stamp on handle, 21/398; two flat wooden spools, Pl. XI, fig. 5, top, r., and second row, 21/389; an undetermined substance tied in a small piece of rag, 21/388; potsherd with a chariot painted on it, 21/381; mud sealing with cartouche of Tuthmosis III, 21/378; wooden figure of grotesque animal, Pl. XIV, fig. 4, 21/375; top of slender sceptre or stick, Pl. XXII, fig. 3, top, 21/373; clay figurine, 21/372; fragment of a wooden comb, 21/371.

#### MAIN STREET.

No. 1. Type B.

*Front Hall*.—The doorway to the living-room had originally been at the south end of the east wall: later this was bricked up, and a new doorway cut as shown on the plan: this doorway had a stone threshold. *Objects*: An impost-stone and a rectangular solid stone table.

*Living-room*.—Pot-holes in floor against north jamb of blocked-up door to front hall and against north wall. *Objects*: Small impost-stone; blue glaze ring, B. 38, with ibex on bezel; fragments of pots, including large store-jar, flat bread-tray, and amphora of green clay.

*Bedroom*.—Floor carefully made of laid bricks. No plaster on walls. High up in filling, fragment of painted plaster from an angle, showing two faces; in curve of angle, plain yellow; bordering this on the flat faces, rough chequer-work of black, white, red and blue squares. This must have fallen from a structure on the roof.

*Kitchen*.—In north-east corner, bin 0·20 m. high, inner angles rounded off and face

lime-plastered. Next to it, box-hearth 0·55 m. high, top heavily lime-plastered, having two shallow troughs lying north by south with a flat hob between. The outline of the smoke-blackened patch on the wall above this suggests that the box-hearth was originally a vaulted oven. In the bread-making area in south-east corner, the mortar let into the floor surrounded by a ring of mud 0·25 m. high and lime-plastered inside. A large mass of the roof had fallen into this room and stood on edge, showing the matting of the ceiling with mud on it 0·25 m. thick. *Objects*: Pot, VI/40.

No. 2. Type A. (Numbered 512 in 1921.)

*Front Hall*.—*Objects*: Curved peg with spherical end, 21/394, Pl. XX, fig. 3, r.; three bone borers, 21/395 (one in Pl. XIV, fig. 1, next to bottom); wooden comb, 21/396; wooden chair-leg in form of lion's paw, Pl. XXII, fig. 3, 21/397; bezel of glaze ring, with cartouche of Tutankhamûn, 21/385; wooden steering oar from model boat, 21/393; stone ring with incised V-pattern, 21/392; circular mat, 21/407.

*Living-Room*.—Hearth of usual type near centre. Divan to south. *Objects*: Basket of usual type, 21/409; limestone offering tray, Pl. XIV, fig. 5, bottom, r., 21/403; dish containing resinous matter, 21/406; three bezels of blue glaze rings all bearing cartouche of Tutankhamûn, 21/376.

*Bedroom*.—Remains of earlier wall beneath south wall and at slightly different angle from it. *Objects*: Ball of thread, 21/363, Pl. XIV, fig. 7; copper borer, Pl. XIII, fig. 4, l., 31/364; wooden kohl-stick, 21/368.

*Kitchen*.—Open hearth in south-west corner.

Pottery from whole house: XVIII/1051, XLIV/1055.

No. 3. Type A. (Numbered 511 in 1921.)

*Front Hall*.—Fresco on upper part of north wall. Figures of Bes in white paint on a mud background, Pl. XVIII, fig. 3. In the centre of the floor two cubical blocks of stone 1·37 m. apart, on the north-and-south axis of the room, with slots in the opposed faces. The upper faces of the blocks measure 34 cm. by 18, and the slots 13 by 11 cm. It seems possible that these served to hold in position the base of a vertical weaving-loom. Such blocks were several times found in the main town, notably in the house of Ra'nûfer. In the south-west corner of this room, but at the height of the top of the walls, were found an axe-handle in wood, 21/271, Pl. XXII, fig. 3, bottom, a cooking pot of type XLVI/1035, Pl. LII, and five complete spindle-whorls (Pl. XXII, fig. 3) with fragments of others. Still others lay in the Main Street outside, and in the street-wall opposite to this house were the pegs used for winding off spun thread described elsewhere. Other *objects*: Two sticks with notched ends, 21/302 and 21/303; small square of wood pierced at the four corners, Pl. XXII, fig. 1, 21/341; large V-shaped piece of wood, possibly part of a plough, 21/325; fragment of a blue glaze plaque, 21/306; limestone seat of the semicircular type, 21/300, Pl. XIV, fig. 8. Also the V-shaped object of wood figured on Pl. XXII, fig. 4, 21/380. It is tied on to the mouth of a calf when it is desired to wean him; the pricking of the sharp point leads the mother to repulse the calf when he attempts to feed. Such objects are still in use in Egypt and elsewhere. Another object of wood, 21/270, is similar to Pl. XXII, fig. 1, bottom, r.,

but made in two parts, the pointed end being made in a separate piece ; total length 36 cm. : the circular upper part is carefully bound round with leather. The example figured (21/348) was found in Main Street just outside the door of the house. It is tempting to suppose that these pegs were driven into the ground or the wall in order to hold some portion of a loom. Perhaps they served exactly the same purpose as the limestone blocks in the Hall.

*Living-Room.*—Considerable remains of roofing were found at a high level. Divan to the south. On the north wall remains of at least three successive layers of fresco. Along the west half of the north wall was found a plain wooden box coffin, length 1·79 m. It was much broken, and contained only a human rib and some fragments of linen. Other objects : Limestone support, Pl. XIV, fig. 2, r. (see p. 59), 21/308 ; fragment of clay figurine painted in red and black, 21/304.

*Bedroom.*—No objects found.

*Kitchen.*—Reached from the living-room by descending two rough steps. On the left a wooden pivot-block, similar to that of the main gate of the village, is set in the threshold. To the south two store-jars. Objects : Thistle bead of yellow glaze, 21/274 ; lotus bead of blue glaze, 21/354.

Pottery from whole house : VII/1003 A, VII/1003 B, 1010 A, 1020 B, V/1026, V/1027, XXXVII/1028, XXXII/1029, XXXVI/1033, 1034 A, XLVI/1035, IX/1053.

#### No. 4. Type A.

*Front Hall.*—Floor 0·22 m. below street level : front door has stone threshold and brick step inside. Against north end of east wall, a square brick bin (or hearth ?) lime-plastered, the top divided into three shallow compartments : south of this a shallow bin formed by lime-plastered mud coping. A stone projects from the north-west corner of the larger bin, and the angle between them has been used as an open fire-place, bin-side and stone being heavily smoke-blackened. Above the bin the wall had been lime-plastered, but later this was covered by a mud plaster. Objects : Green glaze bezel, B. 37, cartouche of the king ; blue glaze sacred eye amulet ; blue glaze ring (eye bezel) ; fragment of green glazed scarab, 22/180 ; ring of twisted bronze wire ; semicircular tripod stone seat.

*Living-room.*—Near the door to the front hall were two fragments of limestone cavetto cornice 0·29 m. high, giving total length of 1·00 m. plus unworked ends to rest on imposts : this must be the lintel of the door, an unusual feature judging from remains. Also fragments of ashlar stone 0·20 m. wide, apparently door-jambs. Objects : Two rectangular stone tables ; wooden spindle-whorl ; wooden bolt pin (*cf.* 22/109) ; fibre paint-brushes, Pl. XXI, fig. 3, 22/167 and 167 A ; two types of matting ; wood rubber, mushroom type ; mud seal-impressions, 22/166 ; fragment of two-strand rope ; sherd with graffito, 22/177 ; pot, XLII/215. Against the north wall, 0·40 m. above the divan, was a painted wooden anthropoid sarcophagus, lidless and empty, tilted up on its side : date probably XXIInd or XXIIIrd Dynasty.

*Bedroom.*—Stone threshold from living-room. Objects : Plain alabaster thumb-ring, 22/176.

*Kitchen and Staircase.*—Pot-lined oven with solid wall-continuation to south ; perhaps only a shelf. Objects : Fragments of blue glaze bezel, B. 31, cartouche of Tutankhamûn ; wooden kohl-stick ; wooden notched peg ; wooden weaving-stick ; end of goat's horn cut to make a handle ; coarse rope head-ring ; fragment of basket ring-stand, *cf.* 22/151 ; fragments of

fabric with palm-fibre warp and the weft made of twisted strips of linen cloth; sherds with rough red and black graffito design, 22/178; several clay sealings.

#### No. 5. Type B.

*Front Hall.*—Walls mud-plastered over earlier whitewash. *Objects:* Rectangular stone trough, rough, 0·42 m. by 0·30 m. by 0·10 m. deep; alabaster vase, 22/172; wooden spindles and whorls; two wooden door-bolts; fragments of matting; fragments of 3-ply rope; mud jar-sealings, one inscribed, 22/175; pots, VII/133, LVI/158, and fragments of types XXXVIII (one large locally-made specimen, one small imported?) and LVI/69.

*Living-room.*—Walls originally lime-washed, later mud-plastered. Divan along west wall (much destroyed): unlined mud hearth; pot-holes in floor just north of hall door and near middle of south wall. In front of hall door a stone bath 0·95 m. by 0·56 m. by 0·12 m. deep. Thresholds of mud only. *Objects:* Blue glaze Taur amulet, A. 8; three blue glaze bezels, B. 32, 33, 34, one bearing cartouche of Akhenaten and the other two flowers; semicircular tripod stone seat 0·21 m. high (*cf.* Pl. XIV, fig. 8, bottom); spoutless stone offering-table, 0·25 m. by 0·23 m.; fragment of wooden head-rest; fragment of bronze borer; fragment of ring-woven basket; shallow basket-work tray, diameter 0·39 m.; mud jar-sealing on rope (plain); sherd with graffito, 22/167; lump of greenish-blue paint; pottery fragments, III/132, etc.

*Bedroom.*—Mud threshold 0·15 m. high: floor rough, walls plainly plastered. *Objects:* Plain mud sealing on rope; flat baking-dish, diameter 0·18 m., height 0·045 m.; fragments of pot, type III/33.

*Kitchen.*—In south-east corner, pot-lined baking-oven; against south wall a curious round fronted hearth<sup>1</sup> 0·30 m. high, Fig. 11, the top divided into three shallow depressions: next to it an enclosure made by a low curved mud coping. Walls originally lime-washed, later mud-plastered.

#### No. 6. Type A.

*Front Hall.*—In south-east corner, bread-making area with coping 0·15 m. high and stone mortar 0·20 m. deep: the wooden pestle was found by this (see Pl. XVII, fig. 5). Above this a patch of wall was originally lime-plastered, but later this was covered with a coat of cow-dung and mud. Beside the front door a double enclosure 0·35 m. high, the north compartment of brick, probably a hearth, the south compartment a bin (?) with as base a (broken) clay dish, diameter 0·55 m. A roughly circular stone column-base with roughened impost-circle, 0·21 m. diameter, was found in the doorway leading to the living-room, and may have belonged there. *Objects:* Rectangular stone trough 0·52 m. by 0·25 m. by 0·17 m. deep;



Fig. 11. Mud hearth: No. 5 Main Street.

<sup>1</sup> See, however, p. 64, above.

rectangular stone seat with no legs, but upper surface hollowed, 0·28 m. by 0·21 m.; flat granite rubbing-quern 0·45 m. by 0·20 m.; limestone offering-table, 0·22 m. by 0·20 m.; wooden pestle, 22/149; wooden bolt 0·23 m. long; fragment of turned wooden stool-leg; wooden comb and fragment of second; fragments of roofing material; floor broom, Pl. XXI, fig. 3, 22/150; basket ring-stand, 22/151; pottery vessels, VI/1, VI/36, VI/37, VI/38, XXI/1002, LVII/71, and fragments of baking-dish, green clay amphora, large water-pot, *marmite*, large bowl, etc.

*Living-room*.—Against north wall two shallow holes in floor, one containing wood ashes as if for a second fire. *Objects*: Oblong stone table; wooden weaving-stick; wooden box-lid 0·55 m. by 0·40 m.; string of small paste beads strung in alternate pairs of red and blue; a clay crucible; pots, LIV/66, and fragments of large store-jar, green clay amphora and saucers.

*Bedroom*.—The two projecting walls, 0·60 m. high, were probably shelf-supports. *Objects*: Model stool-leg, wood, 22/142; twist of coarse rope; two plain mud jar-sealings; fragments of red clay saucer and of other coarse pots.

*Staircase*.—No trace of oven, but walls smoke-blackened in patches. Two bottom treads solid; along south wall remains of three more treads (total height 1·05 m.) carried on sloped timber (one pole *in situ*, Pl. XVII, fig. 4, impressions of others on brickwork): a cupboard below. *Objects*: Two plain jar-sealings.

#### No. 7. Type A.

*Front Hall*.—Walls very well mud-plastered. South part of room used as kitchen, separated off by low coping, and floor raised 0·05 m. In south-west corner remains of box-hearth, wall face above smoke-blackened: against south wall stone mortar sunk in floor with raised mud rim 0·40 m. high, diameter 0·45 m. Against east wall box (bin or) hearth, originally vaulted, springers remain and marks on wall-plaster showing original internal height 0·60 m. Open bin in south-east corner. Remains of oval lime-plastered area against east wall north of vaulted hearth. Let into floor near front door, a stone pot-stand, bowl-shaped, and another against south jamb of door to living-room. Both doors have stone thresholds. *Objects*: Upper part of clay doll, Pl. XXIII, fig. 2, 22/137; wood chopping-block, cf. 22/134; fragments of wooden stool(?); fragments of matting, straight canes 0·90 m. long, laced together five times in their length with 2-ply string; pottery fragments, store-jar, etc.

*Living-room*.—Stone pot-stand let into floor. In west side of room two socketed stones more or less in position, apparently to take a horizontal beam (? bed-beam of loom). *Objects*: Plank 0·70 m. long by 0·20 m. wide and 0·06 m. thick, strengthened by rabbeted and bolted tongue-pieces; wooden weaving-stick, 22/135, Pl. XIX, fig. 4, top, second from left; chopping-block, 22/134, Pl. XIX, fig. 4, top row; circular wooden box-lid (?); fragment of axe-handle; rectangular box-lid, 0·11 m. by 0·06 m.; bronze needle, 22/136.

*Bedroom*.—Wooden sill and step down to floor (0·30 m. below that of living-room). Along east wall a brick bench 0·20 high (bed-place ?). From north wall two party-walls 0·60 m. high, shelf supports. Sunk into bench in north-east corner a jar, LI/60. *Objects*: Pomegranate bead of black and white glass; two limestone rings (broken); knotted coil of leguminous fibre.

## No. 8. Type A.

*Front Hall.*—Two doors on to the street: the north door has two steps down, the floor level being here 0·30 m. below street level; the south door has no threshold, but across it a single-brick barrier 0·35 m. high, with new mud jambs. Threshold of living-room door is of ashlar 0·15 m. high. Against its south jamb a socketed stone in position; and facing this, against the west wall, a companion stone, behind which a rectangular hole in the wall 0·07 m. above floor level, 0·53 m. high and 0·40 m. wide, giving on to a trough below the street 1·80 m. long, 0·40 m. wide and 0·25 m. high, roofed with timber and mud. (*Cf.* Houses Nos. 7 and 9.) Against the west wall, a pot-base sunk in the floor. South-east corner of room, the floor strengthened with boulders set in mud; a circular depression (diameter 0·55 m.) against the edge of this paving was perhaps for a hearth. In the south-east corner a rectangular stone trough 0·52 m. by 0·35 m. by 0·15 m. deep, not in position. Against the south jamb of the inner door, a stone impost, not in position. *Objects:* Flat saddle-quern of red sandstone 0·34 m. by 0·18 m.; shallow circular stone bowl, diameter 0·25 m.; two bronze blades, 22/99, 22/100; fragments of wooden stool with square wickerwork seat, 0·28 m. by 0·27 m., legs 0·26 m. high; sieve, 22/103; wooden mallet, 22/102, Pl. XIX, fig. 4, bottom; axe-haft, Pl. XIX, fig. 3, 22/101; coarse matting from roof; fragments of tanned leather; part of large amphora and of clay bowl, XLIII/175.

*Living-room.*—(Pl. XVII, fig. 3.) On divan, a stone table. In north-west corner a stone bath, with spout running to waste-pit formed of large jar sunk in floor and rimmed with stones. Against west wall another pot sunk in floor. Door to bedroom has wooden sill slotted to take jambs. *Objects:* Second rectangular stone table; scarab, 22/98; bronze borer, 22/106; wooden rubber, 22/108, and pounder; wooden comb, 22/107; wooden latch, 22/109, Pl. XIX, fig. 3; fragments of three large store-jars, of two painted pots, and of pot type II. Also matting from roof.

*Bedroom.*—North half of room carefully mud-paved, south half rough and at lower level. *Objects:* One impost-stone; base of basket; fragments of pots XXV/137, two flat plates, black marmite, amphora, etc.

*Kitchen and Staircase.*—Oven 0·80 m. high. A shallow depression in hob to south apparently used as charcoal grate (charcoal was found on the floor beside it and in the cupboard below stairs). Square bin 0·70 m. high. Of stairs, four treads give height 0·90 m.; upper treads (parts of two left) rested on slanting poles, the holes for which only remain. Floor of cupboard covered with fine white cement, which runs beneath brickwork of stair, so must be earlier. *Objects* (mostly found in cupboard, together with much straw): Two impost-stones; pounding-pebble; wooden peg and bar; wooden box-lid; wooden mallet, 22/121, Pl. XIX, fig. 4; stool-leg, 22/122, Pl. XIX, fig. 4, top, l.; spoon, 22/123, Pl. XIX, fig. 4, bottom, r.; wooden pounder; mud jar-sealing, 22/124; sandal, Pl. XX, fig. 2, 22/120, and fragments of second; child's sandal, 22/119, Pl. XX, fig. 2; cow's horn; goat's horn; tiny bundle of linen; fragments of two clay crucibles; pots, IV/51, VI/50, VII/52, XLIV/48.

## No. 9. Type A.

*Front Hall.*—Walls well plastered. Thresholds of rough stone. Against east wall square vaulted bin or oven 0·35 m. high; north of it a lime-plastered bin 0·15 m. high. Fireplace in south-east corner (?). In west wall a hole 0·45 m. by 0·40 m., 0·20 m.

above floor-level, the top supported by timber, gives on a trough running under street, 1·55 m. long, 0·45 m. wide by 0·35 m. deep, roofed with stones and timber and earth above. Opposite the hole, against the east wall, was a socketed stone, behind which in the wall-face was a slight hollow cut into the brickwork and unplastered, as if to accommodate an object running up against the wall. In the filling was a second socketed stone. The whole may be remains of a loom. *Objects*: Stone trough with sloped sides 0·31 m. by 0·20 m. by 0·14 m. deep; stone circular bowl, diameter 0·24 m.; two semicircular tripod stone seats; oblong stone table; wooden pestle; four wooden spindles and whorls; pots, IX/5, XLIX/49, and fragments of store-jars, etc.

A mass of brickwork 0·60 m. high had fallen from the south jamb of the front door and lay intact across the room; over this lay masses of roofing-material, branches, twigs, and mud trodden to a smooth surface, refaced at least once. To the east of this, above the wall debris, were quantities of painted plaster, whose position showed that it had originally stood above the roof. (See below.)

*Living-room*.—Walls mud-plastered over earlier whitewash. Unlined mud hearth. Store jar sunk in floor near bedroom door. *Objects*: Wooden handle, 22/143; wooden axe-haft, 22/145; fragments of loop-woven basket; sherd with graffito, 22/144; pottery fragments, LXVII/119, etc.

*Bedroom*.—From south wall, two sleeper walls 0·30 m. high (original height), supports for (shelf or) bed. In middle of east wall, 1·20 m. up, a round-topped niche 0·40 m. high by 0·25 m. wide by 0·25 m. deep, the top smoke-blackened, clearly a receptacle for a lamp. *Objects*: Limestone plaque of Amon ram, 22/139; fragment of clay uraeus, Pl. XXIII, fig. 5, 22/140; five clay "magic" balls, three showing seal-impressions; wooden weaving-stick; lime jar-stopper; broom bound with string; twisted fibre head-ring; basket ring-stand, Pl. XXI, fig. 3, 22/146; fragments of leather both untanned and painted.

In the filling, 0·75 m. to 1·20 m. above floor-level and on the top of the roofing-material which filled the lower part of the room, mostly in the north and east part, quantities of painted plaster, including fragments of the pilaster Pl. IX, fig. 2; see p. 59. It had clearly stood above the roof, and since some was found here and some in the front hall, but none in the living-room, it would seem that the structure to which it belonged had stood above the living-room, its walls falling outwards when the house collapsed.

*Kitchen and Staircase*.—Plastered walls completely smoke-blackened. In south-east corner two pot-lined ovens 0·50 m. and 0·60 m. high. Of stairs no treads left, but traces of supporting timbers. Much charcoal in the ovens; room deep in ashes and burnt straw. *Objects*: Wooden weaving-stick; fragment of small wooden box.

#### No. 10. Type B.

*Front Hall*.—Front door threshold of stone 0·15 m. high. Threshold of living-room door 0·18 m. high, of stone and mud with traces of wooden sill, and traces of wooden jambs on plaster. Against east wall, box hearth 0·40 m. high and lime-plastered bin 0·15 m. high; in front of this, stone mortar sunk flush with floor. Near front door, stone jar-stand sunk in floor with mud rim round it 0·35 m. high, incomplete on north side: by the side of this opening (0·15 m. wide) is a peg driven into the floor and projecting 0·18 m. *Objects*: Semi-circular tripod stone seat; two wooden combs, 22/95, 22/96, Pl. XIX, fig. 3; 15 wooden spindles;

wooden thirl-pin, 22/97, Pl. XIX, fig. 3; fragment of wooden lock (?); a large basket and, inverted over it, a basket tray, 22/115; pottery vessels, XXIX/9, LII/62.

*Living-room.*—By east wall, pot sunk in floor. Against each jamb of doorway from hall, an impost-stone in position; a third found loose in filling. In east wall, 0·80 m. up, is a niche 0·27 m. high by 0·23 m. wide by 0·17 m. deep, the top heavily burnt inside, clearly a receptacle for a lamp. In the middle of the floor a slight circular depression (diameter 0·40 m.); in the filling was a round flat stone with on top surface a roughened circle diameter 0·21 m., clearly a column-base and probably belonging to the depression. *Objects:* Circular stone table; stone offering-table 0·20 m. by 0·17 m.; fragment of inlaid wooden box, Pl. XX, fig. 1, 22/113; lid of painted box, Pl. XX, fig. 1, 22/114; adze handle, 22/127, Pl. XIX, fig. 4; wooden kohl-pot, 22/125, Pl. XIX, fig. 4; six sticks tied together with string; wooden rubber; basket, 22/128, Pl. XXI, fig. 3; rope ring, 22/129; fragment of another basket; fragments of leather tied together; shallow granite bowl, diameter 0·17 m.; box lid, Pl. XIX, fig. 4, 22/126; wooden object, Pl. XIX, fig. 2, 22/117; two pottery saucers.

*Staircase.*—Floor of rough stones. Stairs destroyed. *Objects:* Two wooden weaving-sticks, 22/78, 22/79.

*Bedroom.*—At the east end of the north wall, 0·15 m. up, a niche has been cut into the brickwork: 0·40 m. west of this, at same level, a hole cut through the wall (a broken niche ?); perhaps cut to support the side boards of a bed. In the east wall, 0·50 m. up, a triangular niche 0·20 m. wide, for a lamp.

*Kitchen.*—Brick threshold and stone-and-brick step down (0·35 m.) to floor. Against west wall, bin 0·60 m. high. Pot-lined oven. In south-east corner, box hearth 0·45 m. high with draught-hole in long side: wall along here much smoke-blackened. *Objects:* Granite pounder; twig head-ring; stone spindle-whorl; two jar-sealings.

Much painted plaster was found high up in the filling, in the north and north-west parts of the room, lying on the top of fallen roof-material. It was of the same character as that in house No. 9, and must have fallen from the same place. See p. 80.

#### No. 11. Type A.

*Front Hall.*—In east wall, 0·25 m. up, a hole 0·45 m. by 0·30 m., communicating with living-room. In south wall a door gives access to the cupboard under the staircase of No. 10; but this door may be only a niche broken through, as the cupboard is also reached from the hall of No. 10. Against north wall, box hearth 0·40 m. high and bin 0·10 m. high. Against east wall a naturally-holed boulder let into floor as tethering-block. Floor against west wall strengthened with rough boulders: by these a limestone pot-stand let into the floor. *Objects:* Shallow limestone mortar (diameter 0·20 m., depth 0·12 m.); two rectangular limestone troughs (0·40 m. by 0·35 m. by 0·12 m., and 0·40 m. by 0·18 m. by 0·12 m.); broken stone penannular ring; wooden chopping-board, Pl. XIX, fig. 2, l., 22/55.

*Living-room.*—Walls not plastered: much rubble in the lower courses of north wall. Against south wall a mud manger 0·30 m. high, before which a naturally-pierced boulder sunk in the floor as tethering-stone, a three-ply hemp cord still fast through the hole. Against east wall a shallow square trough cut in floor, full of barley winnowings. *Objects:* near west wall a large palm-fibre mat 2·80 m. long, width uncertain, the fibre tied at 0·20 m. intervals with hemp cords; by this, fragments of large painted pot.

*Bedroom.*—In west wall, 1·00 m. up, a round-backed recess 0·18 m. deep by 0·30 m. wide (top missing), probably for a lamp. *Objects:* Stone trough 0·42 m. by 0·23 m. by 0·25 m. high, internal depth 0·15 m.; mud jar-sealing, 22/16, and remains of second; clay button, 22/7; fragments of linen cloth; *dōm* nuts; pot, v/171.

*Kitchen and Staircase.*—Partition screen 0·15 m. high: pot-lined oven full of ashes. The whole room-floor covered with a layer of straw ash 0·60 m. thick, and clean sand above; no remains of roofing beams, brushwood or earth: it is almost certain that the kitchen had no permanent roof, but was covered in with a mat or light thatch awning on which straw-fuel may have been piled. *Objects:* Blue glaze bezel, 22/8; clay uraeus, 22/5.

#### No. 12. Type B.

*Front Hall.*—Against south wall, box-hearth 0·35 m. high. *Objects:* Rectangular stone trough 0·40 m. by 0·20 m. by 0·15 m. deep (inside); stone mortar, diameter 0·23 m., depth 0·12 m.; limestone mould, Pl. XXIII, fig. 3, second row, l., 22/50; two spindle whorls; fragment of wooden box; fragment of fine matting.

*Living-room.*—Unlined mud hearth joined to divan. Low curtain-wall at door end of divan, 0·60 m. high. By south wall, store-jar sunk in floor. In east wall, 0·20 m. up, a hole 0·20 m. by 0·15 m. through to kitchen. On east wall face, near bedroom door, a smoke patch shows where a lamp stood on floor. *Objects:* Circular stone table (?); blue glaze bezel, B. 5; alabaster finger-ring; wooden stud; wooden chopping-block (?), 22/68; rudder of model boat, 22/44, Pl. XIX, fig. 2, bottom, second from r.; stick with string (boat's yard ?), 22/45; wooden drill-handle; stone jar-stopper, 22/40; two baskets, 22/66, 22/68; rope head-ring, Pl. XXI, fig. 1, r., 22/39; base of basket; fragments of cloth; fragments of skin; plain stone stela (?); pots, types XXI/1029, XXXII/12.

*Staircase.*—Rough manger in cupboard below stairs: floor of boulders.

*Bedroom.*—*Objects:* Four impost-stones; three wooden spindles complete and one whorl; wooden knife-handle, Pl. XIX, fig. 2, bottom, l., 22/47; T-shaped wooden object, Pl. XIX, fig. 2, 22/46; fragment of 2-ply rope; clay ring-stand.

*Kitchen.*—Along south wall three shallow pot-holes. No trace of cooking arrangements. *Objects:* Rectangular stone table; semicircular limestone trough, 22/25; limestone mould, Pl. XXIII, fig. 3, second row, r., 22/24; wooden jar-stopper, 22/27; wooden plug, 22/26; wooden weaving-stick, 22/28; wooden objects, 22/37, etc.; quantity of charcoal; twist of 3-ply rope, Pl. XXI, fig. 1, bottom, r., 22/38; fragment of basket-work, Pl. XXI, fig. 1, top, r., 22/29; fragment of matting; broken stone penannular ring.

#### LONG WALL STREET.

#### No. 1. Type B.

*Front Hall.*—Not excavated.

*Living-room.*—Not excavated.

*Bedroom.*—*Objects:* Semicircular legless stone seat.

*Kitchen.*—Hearth in north-east corner. At one time a doorway was cut through into the bedroom, but later this was blocked by a screen wall. In north-west corner a hole has been cut through the wall into the living-room. *Objects:* Impost-stone; stone pounder;

bronze borer, 22/183; bronze fish-hook, 22/184; wooden stud; wooden razor-handle, 22/187; wooden weaving-stick; rope slip-knot; linen bundle containing seeds; wooden object, Pl. XIX, fig. 1, bottom, l.; cf. pp. 75-6.

#### No. 2. Type A.

*Front Hall*.—Not excavated.

*Living-room*.—Not excavated.

*Bedroom*.—Not excavated.

*Kitchen and Staircase*.—Against south wall, in front of door, a low bin, once lime-coated; then a box hearth, vaulted and lime-washed inside; in south-east angle remains of open bin. In north-east corner, bread-making area with coping 0·25 m. high, and mortar sunk in floor: between this and stairs, rectangular bin full of barley husks: husks also in cupboard below stairs. Of stairs only one tread left.

#### No. 7. Type A.

*Front Hall*.—On north wall, west end, 0·80 m. up, a decorative panel in black on white-washed ground, 1·63 m. long by 0·73 m. Design practically unrecognisable owing to condition of plaster: along the top, a band of lotus-petals, points downwards; the left half of the panel taken up with two offering-tables, whereon lotus leaves, etc. (?).

In north-west corner, a double manger or bin with a stone step in front of the south compartment. Against south wall, a stone mortar let into the floor and flanked by large stones 0·30 m. high—probably jar-stand (see Fig. 12). *Objects*: Alabaster kohl-pot, 22/161; blue glaze pendant, 22/162; blue glaze Taurt amulet; mud jar-sealing; pots, I/43, III/34, VI/35, XI/129, XXIV/16, XXXVIII/240, XLIII/260, LI/61, LV/68, LV/81, LXXII/164, LXXIV/208, LXXX/252, and fragments of I/1019, LXX/130 and many others.

*Living-room*.—On west divan four impost-stones forming a rough square (0·60 m.) against the wall and seeming virtually in position (for a canopy)? Against north jamb of door to kitchen, a hole for a locking-beam cut into north wall. *Objects*: Semicircular legless stone stool; two blue glaze bezels, B. 23, 24, one with *nefer* sign, one with cartouche of Tutankhamûn; two wooden jar-stoppers; mud jar-sealing.

*Bedroom*.—In south-west corner, a socketed stone. *Objects*: Brown stone bezel; marble drill socket; bone scraper; fragment of bone kohl-stick (?); two mud jar-sealings; painted Tutankhamûn; clay cup; pots, XXV/27, LII/63.

*Kitchen and Staircase*.—Pot-lined oven 0·75 m. high. Against north wall, stone base of open hearth, wall blackened above. Of stairs three treads left (0·60 m.) and traces of beams supporting upper treads, the beam ends wedged with large stones. *Objects*: Blue glaze bezel, B. 22 (flower); sherd with graffito, 22/157; remains of large store-jar.



Fig. 12. Stone mortar: No. 7 Long Wall Street.

## No. 8. Type A.

*Front Hall*.—Divided into two parts by a screen wall, each part having a doorway to street: screen wall very roughly built. North-west corner enclosed by coping; in the angle, stone bowl (jar-stand) let into floor and rimmed with stones and mud 0·40 m. high; east of this a pot-hole in floor; 0·35 m. above jar-stand, a hole in north wall where a peg has been (perhaps a lamp-shelf); wall here bears traces of oily soot. In south-west corner, circular oven 0·60 m. high; ashes 0·05 m. thick all over this part of floor. Rough stone threshold to living-room. *Object*: Pot, XIII/140.

*Living-room*.—Walls mud-plastered over whitewash. *Objects*: Three roughly circular stone column-bases, diameter 0·14 m., height 0·10 m.; limestone hawk amulet, 0·055 m. high; wooden top; clay uraeus, Pl. XXIII, fig. 5, 22/131; mud jar-sealing, 22/197; green clay pot. The hearth-bowl of type IX/242.

*Bedroom*.—*Objects*: Limestone stela, Pl. XXIII, fig. 4, 22/130; three wooden spindle whorls; fragments of twig head-ring; mud jar-sealing, 22/196; lump of green paint; fragments of painted clay pot, etc.

*Kitchen and Staircase*.—Against south wall, box hearth lime-plastered above; in south-west corner, remains of bin also lime-plastered.

## No. 9. Type A.

*Front Hall*.—Divided into two rooms by a later wall. *North room*: in the north jamb of street door a bolt-hole 0·90 m. up. North of door in west wall, apparently a window on to the street 0·45 m. above street level, 0·70 m. above floor at this point, 0·75 m. wide. *Objects*: Fragment of wood inlaid with blue paste, 22/86; clay ring-stand. Pots, I/42, VI/124. *South room*: divided by partition 0·30 m. high. In west part, against north wall, box hearth (late addition); in north-west corner a bin lime-plastered 0·85 m. high; stone mortar sunk in floor. In east part, against east wall, rough hearth 0·30 m. high built of five boulders; in south-east corner, two pointed-based amphorae. *Objects*: Bronze needle, 22/93; fragments of store-jar.

*Living-room*.—Divan 0·14 m. high, with end screen 0·80 m. high; bowl-lined hearth. *Objects*: Stone bowl with Hathor head, 22/94 (Pl. LIV/94); kohl-stick, 22/105.

*Bedroom*.—Stone and mud threshold 0·20 m. high. In north-east corner traces of lime-plastered depression diameter 0·50 m., and two pot-holes. South side of room partially paved, rectangular depression in floor in south-west corner, perhaps for stone bath? Layer of ashes over whole floor. *Objects*: Clay ball with stamps, 22/118.

*Staircase*.—Six treads, giving height 0·95 m. Brick treads supported on poles found *in situ*.

## No. 10. Type A.

*Front Hall*.—North and west walls mud-plastered over painted decoration. The decoration is roughly drawn in lines of heavy white lime on a slate-grey mud surface very thinly applied to wall face. Design (very much damaged), within a frame of two lines at sides and three below, human figures alternately large and small advancing right; in north-west corner square bin originally 0·75 m. high. In north-east corner bin 0·15 m. high, lime-washed inside, next to it a fireplace 0·25 m. high open to south. Against west wall a stone mortar

sunk in floor. Bolt-hole in south jamb of front door. *Objects*: Two socketed stones; semi-circular tripod stone seat; blue glaze bezels, B. 10, B. 11; blue glaze pendant bead; bronze blade, 22/75; fragment of wooden comb.

*Living-room*.—Ash-filled pot-base sunk against middle of south wall and soot-marks on wall above. A patch of soot low down on south wall shows position of lamp set on floor. Much rubble masonry in north and south walls. *Objects*: Limestone mortar; flat stone hone; bronze chisel, 22/87; sherd with graffito, 22/76, and another with roughly-drawn decoration.

*Bedroom*.—In south-east corner a stone bath 1·35 m. by 0·97 m. by 0·19 m. deep, sides sloping inwards. *Objects*: Figurine, 22/85.

*Staircase*.—No cooking arrangements. *Objects*: Two blue glaze bezels, B. 12, 13, one with goat and dish, the other with lotus (?); fragment of clay model bed; pot, LXXXIV/262.

#### No. 11. Type A.

*Front Hall*.—Walls mud-plastered over earlier painted decoration, on north-east and west walls traces of pattern in white lime on grey-black mud ground: lower border, band of outlined squares between two horizontal lines; main design unrecognisable. Doorway to living-room has stone threshold and wooden pivot-block. Against north wall a brick bin 0·60 m. high, in north-east angle bin only 0·05 m. high. In north-east corner a solid block 0·40 m. high. Stone mortar sunk in floor. In east wall 0·25 m. up, a round hole diameter 0·22 m. goes through to living-room. *Objects*: Dead baby wrapped in linen and wearing wooden amulet, Pl. XX, fig. 1, 22/83; flint pounder; blue glaze bezel, B. 1, cartouche of Tutankhamûn; ditto, B. 3, figure of goat; blue glaze Bes amulet; side of small wooden box; rope head-ring, Pl. XXI, fig. 1, I., 22/34; plain jar-sealing; pot, XIII/74.

In upper filling, many fragments of painted wall plaster, some with convex surface: design, black panels divided by yellow bands 0·025 m. wide, red panels edged with black, and some blue fragments. These did not connect with anything in the room and must have fallen from a roof structure.

*Living-room*.—Divan 0·15 m. high; on it circular stone table (or column-base ?). In a hole in the floor, a number of *dôm* nuts. Floor much destroyed: no trace of hearth. *Objects*: Rectangular stone table; stone drill-socket; blue glaze bezels, B. 2, 22/23; wooden pin, 22/15; bronze stud; bronze fish-hook, 22/33; brush, Pl. XXI, fig. 1, top, I., 22/21; fragment of basket-lid, 22/63; fragments of leather; lump of brown gum. In the filling many fragments of mud originally plastered on to wooden poles, many painted yellow, red, blue and black, often with curved surface: clearly from a roof-chamber of post-and-daub construction.

*Bedroom*.—*Objects*: Limestone drill-socket, 22/14; pebble ring, 22/12; wooden door pivot block, 22/20; basket, Pl. XXI, fig. 4, 22/19; twisted gut, 22/13; knot of 2-ply rope; fragments of linen cloth; plain jar-sealing; lump of black gum; *dôm* nuts.

*Staircase*.—In north door-jamb rough bolt-hole. In cupboard below stairs quantities of barley husks and *dôm* nuts.

#### No. 12. Type A.

*Front Hall*.—North part cut off by screen 0·70 m. high to form separate closet. In south-west corner box hearth (full of ashes) 0·35 m. high. *Objects*: Two socketed stones; wooden model oar, Pl. XIX, fig. 2, r., 22/62; wooden spindle whorl; fragments of three

large store-jars, one marked III', and of double vase. In closet, *Objects*: Bronze needle; two plumb-bobs, Pl. XXIII, fig. 3, r. and l., 22/60, 22/61; clay disk, 22/59; mud doll, Pl. XXIII, fig. 1, l., 22/58; fragments of fine matting; fragments of stitched leather; branch of *dōm* palm; fish- and other bones; fragments of store-jars and XIII/75.

*Living-room*.—Divan one brick high, partly edged with stone. Screen at divan end 0·65 m. high. Hall door, threshold 0·35 m. high with wooden sill, step down to room of brick with plank above. Pot-holes against middle of south wall and by south jamb of bedroom door. On south wall, near hall door, soot-marks from a lamp set on floor. *Objects*: green glaze amulet, A. 4, Bes between two Taurts; glaze thistle-head; fragments of large painted jar, pottery types xx/234, XLIII/118.

*Bedroom*.—*Objects*: Fragments of leather; fragments of morticed wood.

*Kitchen and Staircase*.—Trough fire-place in centre 0·55 m. high lime-plastered inside; bin north of it full of barley husks. Partition at foot of stairs 0·30 m. high. Stairs, four treads left, 0·55 m. high. *Objects*: Sheep's skull; fragments of pebble penannular rings; fragments of wooden lock, drill handle, stud, etc.; remains of cake, 22/88. Layer of ashes 0·30 m. thick below floor.

#### WEST STREET.

##### No. 13. Type A.

*Front Hall*.—Against south wall, brick manger (?) 0·50 m. high; in south-east corner brick platform 0·05 m. high, perhaps base of a bin. Depression in centre of floor, for column-base? In north wall, doorway to yard. *Objects*: Granite rubber; two fragments of unfinished alabaster rings; bronze drill; wood pestle 0·55 m. long; wooden comb; inlaid wooden kohl-pot, 22/185.

*Living-room*.—Walls mud-plastered; divan 0·05 m. high; screen at head 0·45 m. high. Unlined mud hearth. *Objects*: Limestone disk (diameter 0·30 m.) used as table for boring stones, its surface being covered with drill-holes; two disks of alabaster, unfinished; bone scraper; glaze Horus-eye ring, B. 41; wooden rubber; wooden kohl-stick, 22/186; pot, VI/116.

*Kitchen*.—Room usually the bed-chamber. Floor, of rock, 0·30 m. above that of living-room by door and sloping up to west. West (enceinte) wall hacked away and the exposed face of rubble and gravel merely mud-plastered. Buttress in south-west corner. In north-west corner pot-lined oven built over foundations of enceinte wall.

*Staircase*.—Stairs occupied whole chamber (destroyed). Under second flight a cupboard, its door 0·60 m. above floor; in it, cut into north wall, oval-topped niche 0·45 m. high by 0·30 m. by 0·10 m. deep. *Objects*: Alabaster core from tube-bored vase; fragments of quartz with experimental drill-holes; two lumps of green paint; bone scraper; bronze nail; foot of wooden head-rest, Pl. X, fig. 2, 22/182.

*Yard*.—The house-site to the north was useless for building, being a rock shelf, 0·80 m. high at east end and sloping up to west: it therefore remained empty and served as yard to No. 13. In north-east corner a dip in the rock, roughly brick-lined, full of goats' dung: animals were presumably kept in the yard. In the north-west corner a circular furnace, standing 0·95 m. high, diameter at bottom 0·60 m., at top 0·90 m., built of bricks and mud

backed with rough stone; at 0·65 m. from bottom bricks project anglewise inwards to support cover, or floor of kiln. Up to 0·60 m. surface heavily burnt and blackened; above this the bricks burnt bright red. By this was the base of a thick clay crucible, heavily burnt. *Objects*: Rectangular stone grinding-slab 0·60 m. by 0·50 m.; unfinished alabaster ring; stone with graffiti, 22/157; two glaze bezels, B. 35, 36, with cartouche of Tutankhamûn, and fragment of a third; green glaze thistle-head bead; Bes amulet; two fragments of bronze borers; two wooden drill handles; wooden kohl-stick; wooden spindle-whorl; clay doll, Pl. XXIII, fig. 5, 22/85; fragments of clay uraeus; two sherds with graffiti, 22/163, 22/164, and one with pot-mark; goat's horn; fragments of shoe-leather; fibre ring, diameter 0·035 m.; small dead fish; sherd with rough charcoal design; pots, VI/28, 29, VI/111–114, XXI/1016, XXV/3.

#### No. 15. Type A.

*Front Hall*.—*Objects*: Pot, XLIII/67.

*Living-room*.—The jambs of the south-west door were (after each plastering) picked out with a band of whitewash. Brick divan 0·10 m. high. Thresholds 0·15 m. to 0·18 m. high. In east wall a hole diameter 0·11 m. goes through to hall, flush with divan level. On divan, solid rectangular limestone table. Just south of hearth, circular depression in floor, 0·30 m. diameter, 0·08 m. deep, probably for column-base. Against west wall a stone bath draining to north (depth 0·14 m. at south end, 0·16 m. at north), close to spout a pot sunk in floor and rimmed with stones. Bath broken and mended with lime plaster. *Objects*: Glaze bezels, B. 17, B. 18, B. 19; fragments of painted pot, sepia on buff, and of eight others, including types VI/1, XXXVIII, LVI/69.

*Kitchen* (normal bedroom).—Partition 0·60 m. high across centre. North of this, trough fireplace 0·35 m. high, with shallow bin against its west side, both lime-plastered; against west wall stone footings projecting 0·40 m., 0·25 m. high. In west wall, above partition, recess (for lamp?) 0·23 m. high by 0·18 m. by 0·15 m. deep. *Objects*: Sherd with graffiti, 22/195.

*Staircase*.—Six treads (solid), giving height 1·35 m.; south return missing.

#### No. 16. Type A.

*Front Hall*.—Front door wide with projecting jambs, threshold 0·17 m. high. North end of room, floor raised 0·05 m.; against north wall, box hearth 0·20 m. high, in north-east corner stone platform for bin, in north-west corner bread-making area with stone mortar sunk in floor. In room a stone slab 0·53 m. by 0·22 m., worn as if a threshold stone. *Objects*: Stone trough 0·53 m. by 0·25 m.; stone offering-table 0·25 m. by 0·18 m.; fragments of big store-jars, amphora, etc.

*Living-room*.—Threshold to bedroom, 0·30 m. high, to kitchen 0·20 m. *Objects*: Stone slab 0·54 m. by 0·21 m., apparently threshold-stone; rectangular stone table; semicircular tripod stone seat; rectangular stone trough 0·50 m. by 0·26 m. by 0·15 m. deep; fragments of three blue glaze bezels (decorative designs); and pottery fragments.

*Bedroom*.—Only north and west walls plastered. *Object*: One *dôm* nut.

*Kitchen and Staircase*.—Pot-lined oven in south-east corner: recess hacked in east wall with stone base for open fireplace. Of stairs two treads left (0·40 m.) and traces of sloping poles to support upper treads. *Object*: Circular shallow stone mortar, diameter 0·30 m.

## No. 17. Type A.

*Front Hall*.—Front door, stone impost for wooden frame in position against north jamb; the frame was further secured by being nailed to a wooden tie built into the jamb at threshold level: no signs of wood on south side. Door to living-room had wooden threshold and on north side stone impost painted red. Against south wall a box hearth with remains of shallow bin in south-west corner. Stone bowl (jar-stand) sunk in floor. *Objects*: Miniature stone offering-table, 22/132; fragment of glaze bezel; wooden roundel, 22/133; pottery fragments of store-jar, amphora, bowls and saucers, including LXXIV/211.

*Living-room*.—Walls mud-plastered over earlier whitewash; in south-west corner, on whitewashed surface, the angle picked out with a vertical red line. *Objects*: Segment of small limestone column; unfinished limestone ring; bone button.

*Bedroom*.—Thrown open to living-room by destruction of east wall.

*Staircase*.—*Objects*: Stone rubber; glaze Bes amulet. Outside, a wooden object, Pl. XIX, fig. 3, 22/111.

## No. 18. Type A.

*Front Hall*.—In north-east corner wall surface heavily burnt and ashes on floor, from an open fireplace. Against west wall a stone bath 1·25 m. by 0·50 m. built of rough stone slabs and sunk flush with floor. *Objects*: Semicircular tripod stone stool; fragments of white pebble ring; fragments of two glazed bezels; clay crucible.

*Living-room*.—Bowl-lined hearth, with pot-hole to east of it. Against south wall, a jar sunk level with floor and east of it a pot-hole. In front of bedroom door a ring-stand cut from neck of large jar found *in situ*. *Objects*: Stone ring-stand, diameter 0·13 m.; stone tray, circular (diameter 0·65 m.), with raised edge, probably stand for water-jar; fragment of flat column-base; stone door pivot; glaze bezel, B. 16, cartouche of Tutankhamûn; painted wooden plaque, 22/154; pottery fragments, VI/39, XX/14, XLI/1056, LXXIV/209, and of other crucibles, store-jar, bowls and marmite.

*Bedroom*.—Walls not plastered.

*Kitchen and Staircase*.—Against east wall, solid brick hearth and shallow bin in north-east corner. Stone mortar sunk flush with floor. Stairs, five treads left, height 1·10 m., solid; upper flight was supported on poles, holes for which visible in brickwork; cupboard below stairs enlarged by cutting away 0·40 m. of east (enceinte) wall. *Objects*: Flat quern of hard stone.

## No. 19. Type A.

*Front Hall*.—In west wall, just north of buttress, 0·20 m. above floor level, a hole 0·25 m. square through to living-room. South end of room screened off for bread-making: screen 0·60 m. high at west end, 0·25 m. high at east; floor within raised 0·10 m. Box hearth 0·25 m. high; in south-west corner low-fronted bin; both lime-plastered. *Object*: fragment of glaze bezel.

*Living-room*.—Walls mud-plastered. Jambs of staircase door picked out on angles with band of whitewash edged with dark red. In centre of room, well-made circular limestone column-base, diameter 0·53 m., height 0·13 m., with marks of column-shaft diameter 0·25 m. set in mortar: painted red. In the street outside was found section of stone column-shaft,

0·55 m. long, diameter 0·22 m. tapering to 0·20 m., having at top end mortice-hole containing wooden peg, plastered and painted dark red; this should belong to the room. *Objects*: Circular stone table; painted clay chalice (broken), XLV/46.

*Bedroom*.—West wall has been hacked away and rebuilt as a thin screen between buttresses.

*Staircase*.—West wall hacked away and rebuilt. Stairs,  $3\frac{1}{2}$  treads remaining (0·70 m.); L-shaped cupboard below. In north-west corner pot sunk flush with floor. *Objects*: Rough millstone; disk of alabaster with handle (vase-cover?).

#### No. 20. Type A.

*Front Hall*.—Floor 0·35 m. below street level. Stone threshold to living-room 0·20 m. high, slotted to take wooden door-frame. North end of room separated off by coping 0·20 m. high; within, on west, bread-making space with mortar sunk in floor; box hearth 0·50 m. high, lime-plastered; in north-east corner shallow bin, lime-plastered, front 0·05 m. high and second partition 0·35 m. high to front coping. On west wall south of coping, marks of burning as if from an open fireplace. In east wall, near north door-jamb, hole made by original wooden peg (? lamp-shelf). *Objects*: Rectangular four-legged stone seat; offering-table 0·20 m. square; stone quern; flat circular stone, diameter 0·35 m., probably column-base; worked stone slab, probably threshold-stone; pottery fragments. Also a small fragment of mud plaster painted bright blue, probably from a roof structure.

*Living-room*.—In west wall, 0·35 m. up, a (lamp?) niche 0·30 m. high by 0·18 m. by 0·12 m. deep. Before bedroom door a stone bath (broken, not *in situ*). Against south wall, jar sunk in floor, containing a second; on each side of it a pot (XXXV/7, XXXV/44) in position. *Objects*: Mud seal impression, 22/141; pottery, types I/41, I/21 B, V/23, LVI/70, LXXIV/207.

*Bedroom*.—Neck of vase sunk in floor as pot-stand. *Objects*: Gazelle horn; pot, XX/15.

*Kitchen and Staircase*.—Peg-hole in south wall 1·00 m. up. In south-east corner pot-lined oven 0·80 m. high set in arched recess hacked into east wall. Floor covered with ashes to depth of 0·70 m. Stairs, six treads left (1·30 m.) resting on brick arches, cupboard below. *Objects*: Stone head-rest; two wooden rubbers; pot, LXXIV/200.

#### No. 21. Type A.

*Front Hall*.—Across room, coping 0·20 m. high. Against south wall box hearth 0·40 m. high, and in south-west corner low-fronted bin, both limewashed. East wall largely of rubble. In north part of room circular stone column-base (?), diameter 0·30 m., height 0·07 m.

*Living-room*.—In west wall, 0·30 m. up, a hole 0·20 m. square going into space (otherwise not accessible) under the stairs. Door to bedroom, ashlar sill, jambs rounded off and edged with lime plaster; doorway partly blocked by partition wall 0·45 m. high. Floor destroyed, no trace of divan or hearth. *Objects*: Circular stone diameter 0·43 m., column-base or table; stone door-sill 0·55 m. long, loose; bowl of coarse red clay; red clay amphora; fragments of store-jars.

*Bedroom*.—Walls much hacked away into round-topped niches thickly mud-plastered. Below foundations and under floor-level (floor itself destroyed), a layer of ashes 0·30 m. deep resting on the rock. Against north wall, two store-jars.

*Staircase*.—Five treads preserved (0·90 m.). In west side of stair-block 0·60 m. up, a wooden beam 0·80 m. long is built into the wall-face. Above this two poles, supporting upper flight, ran across to opposite buttress at 1·40 m. above floor (wood gone, traces left in brickwork). *Object*: Fragment of glaze bezel.

#### No. 22. Type A.

*Front Hall*.—Walls mud-plastered. From north jamb of inner door a 0·20 m. high screen projects. Let into middle of floor a large unshaped but flat-topped stone, probably a post-base. North part of room separated by screen 0·50 m. high; within, on west, bread-making area with stone mortar sunk in floor; box hearth 0·40 m. high. In north-east corner shallow lime-plastered bin. Lime plaster also on wall-face above hearth.

*Living-room*.—Walls originally mud-washed but lime-plastered over the divan, and hall door outlined with whitewash; later mud-plastered all over. Bedroom door partly blocked by partition 0·40 m. high. Bowl-lined hearth. In north-west corner, on divan, a stone bath 1·15 m. by 0·61 m. *Objects*: Circular stone table; impost-stone; pot, LXXIV/210.

*Bedroom*.—Floor 0·15 m. below that of living-room. *Objects*: Blue glaze bead; wooden top, Pl. XIX, fig. 3, 22/110; fish-bone; mud ball.

*Staircase*.—In east wall, 1·20 m. up, round-topped niche cut in wall, 1·00 m. wide by 0·35 m. deep, top broken. Five treads left (1·20 m.) supported on series of brick arches roughly built with voussoirs; L-shaped cupboard below.

#### No. 23. Type A.

*Front Hall*.—Walls very rough, largely rubble built and never plastered: no laid floor. Before street door, stone jar-stand let into floor. *Objects*: Blue glaze scaraboid bead; bone stylus; fragments of painted pot, LXX/130, and of types v/30, vi/31.

*Living-room*.—At a late period the door on the south-west was walled up to the height of 0·50 m. and a shed built in the north-east corner: this has threshold, east jamb and lintel of unworked stone, the entrance only 0·45 m. high by 0·30 m.: much straw on floor; it must have been a goat-stable. The north-west corner was also partitioned off at a late period. *Objects*: Glaze lotus bezel, B. 13; fragments of water-jar.

*Kitchen*.—In south-west corner. West wall, south part hacked into to make a cupboard 0·60 m. above floor level and 0·35 m. deep; north of this a box hearth 0·50 m. high and shallow bin in north-west corner. South part of floor cut down 0·40 m. deep to make a store for chopped straw. *Objects*: Glaze bezel, B. 14, cartouche of Tutankhamûn, and fragment of second; bone smoother; fragment of wooden comb; fragment of pot, type XLI/1056.

*North-west Room*.—In north wall, 0·50 m. up, a niche cut into brickwork 0·65 m. wide, circ. 0·75 m. high (top gone) by 0·60 m. deep. In south-west corner on stone foundation a brick bin 0·55 m. high, behind which cut into wall a niche 0·65 m. high by 0·55 m. by 0·25 m. deep. *Objects*: Glaze bezel, B. 15; plain mud jar-sealing; goat's horn.

#### No. 24. Type A.

The house has been turned round so as to open on to Long Wall Street and the rooms re-modelled to suit.

*Front Hall.*—Front door roughly cut through enceinte wall. West wall thin and part of later alterations. Little plaster left on walls. By south jamb of front door, stone bowl (jar-stand) let into floor. *Objects*: A dressed stone 0·40 m. by 0·23 m., perhaps part of a door-frame; limestone spindle-whorl, 22/18; two plain jar-sealings; pottery fragments.

*Living-room.*—In north-west corner base of store-jar in position. *Object*: Piece of worked alabaster, 22/104.

*Bedroom.*—The north wall runs over bed of ashes and rubbish, its foundations much above those of other walls: it dates from the re-modelling. The doorway is the original one, but has had a new threshold (brick) laid over rubbish and sherds. West wall very shoddy. No floor left. Walls mud-plastered. *Objects*: Blue glaze scaraboid bead; wooden disk, 22/52; two wooden jar-stoppers; fragment of alabaster pot.

*Kitchen and Staircase.*—In north-west corner pot-lined oven (0·80 m. high), occupies position of original front door. Against north wall, an open hearth. In south-west corner a low bin apparently in stair-cupboard. *Objects*: Fragments of alabaster vase.

#### No. 26. Type A.

*Front Hall.*—North part screened off by wall 0·40 m. high, at the west end of which a bin 0·40 m. high, and in the north-west corner a second bin 0·15 m. high. In the east end of the north wall, at floor level, a hole had been burrowed into the brickwork 2·00 m. long (running east) and 0·50 m. square. Against east wall, a tethering-stone. *Objects*: Stone trough; two socketed stones; glaze bezel, 22/11; pot, LXXXV/263.

*Living-room.*—Walls mud-plastered over an earlier surface of whitewash, divided by black bands 0·07 m. wide into panels starting 0·55 m. above floor level. Divan 0·15 m. high. Against south wall, base of clay jar sunk in floor, and east of it a second pot-hole. Threshold to stair-chamber 0·30 m. high: by it a rough but flat-topped stone set into floor 0·10 m. high. *Objects*: Glaze bezel, 22/9; piece of matting.

*Bedroom.*—Walls unplastered.

*Staircase.*—North (enceinte) wall has been breached and re-patched with rough walling, leaving broad recess. Only bottom tread left. Open cupboard under second flight, low bin under first flight. Much burnt ash in room, probably from roof only: no trace of cooking arrangements.

## CHAPTER IV.

## TOMB-CHAPELS.

THE promontory of low hills which juts out into the plain of el-'Amarneh east of the main city mounds of Akhetaten has been described in Chapter III. It is here, on the slopes of the broad open valleys which cut up the promontory, that the tomb-chapels about to be described were discovered. The hill-slope to the east of the Eastern Village is covered with them; on the north they extend on to the ridge which closes the valley on the north side, while on the south they are continued on to the north slope of a second valley which enters the first from an easterly direction, while some actually lie in the shallow bottom of this second valley.

## ARCHITECTURAL DETAILS.

The material used is almost entirely mud-brick, though in some of the foundations and outer walls rough pieces of limestone, which abound in the valleys, were employed. In several cases, too, the outer court or the precinct had been lined out with a single course of such stones. The difficulties of construction on a somewhat steep slope were overcome partly by cutting back into the soft rock, partly by artificial terracing and the use of short flights of steps. Such chapels as actually lay on the hill-sides were so orientated as to face outward from the hill; thus those on the north slopes of both valleys ran north and south, and were entered from the south or lower end, as was only to be expected, while those on the east slope of the main valley lay east and west, being entered from the west. The chapels found in the bottom of the branch valley lay east and west, the approach being from the west. Pls. XXIV and XXV.

The chapels vary considerably in plan, but the essential features always present in the finer examples are an outer court, an inner court, and a shrine with niches or recesses.

The outer court was probably bounded only by a low brick wall; indeed, in some cases it was merely marked out by lines of rough stones, but, like all the other parts of the building, it had a flooring of mud plaster. The inner court lay immediately behind the outer, and invariably had a low bench of plastered mud brick running round its walls on the inside, clearly seen in Pl. XXVII, fig. 3 (Chapel 522). The shrine is the most variable part of the building, but in essence it is simply a rectangular room lying behind the inner court, sometimes entered from this by a pylon-like doorway (Pl. XXVII, fig. 3), and having niches in its back wall. In the floor of the shrine there is generally a small step or a dais one brick in height in front of the niches, and in addition to this a small pedestal of brick or limestone opposite the centre of each niche, possibly intended to support the ceremonial vases. These pedestals are very clear in Pl. XXVII, fig. 1, which is a view of the shrine and niches of Chapel 524 taken from the inner court. From the same figure a good idea of the niches can be obtained. In this case they are three,

though in other shrines they varied from one to four, the centre niche being placed rather higher than the other two. The side-posts of the niches are rebated, perhaps to take a wooden shutter. At the back of the niche, at a height of only 38 cm. from its floor, the wall comes forward in a cavetto cornice (very clear in the right-hand niche in the photograph), and then recedes again to form a sort of shelf in the back of the niche. This shelf runs back for 50 cm., and, despite the ruined condition of its walls, can be traced upwards to a height of at least 20 cm. Thus each niche contains a corniced bench or step, which we might perhaps be justified in calling an altar. In the centre niche of Chapel 524 is a small brick pedestal, visible in the photograph, and there is a similar structure in the east niche of 553. No objects were found in the niches, but in 524 a number of white-washed pottery vases were found on and near the dais below. These are shown in position in the photograph.

With regard to the roofing of these buildings all is conjecture. The outer court, and probably in some cases the inner one too, was open to the sky, and the comparative lowness of the walls here is not merely due to greater denudation. On the other hand, in the inner court of 528 were found traces of square brick columns, which perhaps formed a colonnade on each side of the court. The inner court of 554, where two column bases were found, may have had a colonnade across its north side, in front of the shrines. The shrines may have been partly or even wholly roofed. In 525 the shrine lay on a higher level than the inner court, from which it was reached by a flight of eight steps (see Pl. XXVII, fig. 2); it was so shallow that it formed a mere raised platform in front of the niches. On its floor were found fragments of two short columns of mud covered with attractively painted stucco, one of which had clearly stood on each side of the head of the flight of steps. On the steps and in the court below lay a number of bricks to which still clung in places a white painted stucco with black hieroglyphs, from which it was possible to restore with some completeness an ordinary *htp dī niswt* prayer to Amûn (see below, p. 95, and Fig. 14 on p. 96). With these bricks lay numerous pieces of a roll and cavetto cornice painted in red, white, blue and green. From the position and number of the fragments, supported by the probable length of the inscription, Mr. Newton was able to infer with tolerable certainty that the two columns, whose height was approximately calculable from the fragments, had supported an entablature carrying the inscription and surmounted by the cornice, running from wall to wall across the front of the shrine. This not only determines the height of the side walls at this point, but places it almost beyond doubt that the whole of the shrine with its niches was roofed over, since it is impossible to suppose columns and an entablature without a roof to support. Pl. XXV, top, and Pl. XXVI, show Mr. Newton's restoration of the whole, the latter giving a very good idea of the pleasing appearance which the group of chapels must have presented in 1350 B.C. or thereabouts, with their brilliantly white walls and brightly coloured columns and friezes lit up by the Egyptian sun. In the restoration the inner court is shown as unroofed but surrounded by a fairly lofty wall.<sup>1</sup> The suggested elevation of the doorway is based on the assumption that the thickened portions of the wall on each side

<sup>1</sup> In the outer court of 529 a portion of the north wall had fallen in antiquity into the court and been covered and so preserved. Fourteen connected courses of brick were still to be counted in the fallen portion, and three courses still remained upright, giving a total of seventeen courses or 187 cm. for the wall.

of the door, and also the short returns at the outer ends of the walls which form the entrance passage, must have been intended to carry an extra weight. The numerous representations of gateways depicted in the tombs suggest the probability of some such arrangement as that adopted here.

Several other chapels yielded small fragments of painted stucco, but never in such positions or quantities as would enable us to draw any inferences of value as to the structure of the building or the exact nature of the decoration. An exception should perhaps be made in the case of 551, for details of which see below, p. 107; 553 yielded fragments of cornices, probably, as in 525, from the front of the shrine. In the inner court of 529 were found a lintel and parts of the side-posts of a doorway in limestone; the lintel carries a roll and cavetto cornice coloured red, white and blue, while the side-posts are inscribed with black hieroglyphs. Those on the left post have completely perished, while on the right little is visible save the name of Amûn. From the position in which these fragments were found it would seem that they formed the gateway from either the outer into the inner court or from the inner court into the shrine.

#### POSITION OF THE TOMB-SHAFTS.

There can be no tomb-chapel without a tomb, and no sooner had we established the funerary nature of these buildings than we set to work clearing the hill-slopes above the chapels for the shafts which might reasonably be supposed to lie there. The result was disappointing. Of nine shafts excavated four had never been completed, and of the remaining five only one could by virtue of its position be connected with a chapel, and that with no great certainty. This shaft lay on the main axis of Chapel 525, and 12 metres to the north of, *i.e.*, behind it. The shaft itself was roughly rectangular, and contained a flight of four steps leading downwards to the west for about two metres. The chamber lay to the west, and its entrance was roughly walled up with loose bricks, except for a space of a few centimetres at the top. Immediately inside this wall, above the sand with which the chamber was almost completely filled, lay the body of a small child on its back with head to the east. On clearing out the sand the chamber was found to be irregular in shape owing to the presence of a huge fault in the rock. At two points the dangerous looking ceiling had been supported by brick walling. The body had completely disappeared, but there were fragments of what appeared to be a plain wooden coffin, also a wooden chair-leg, 21/550, a fragmentary hieratic ostracon, 21/551,<sup>1</sup> and a fine set of late XVIIIth Dynasty pottery. The child was obviously a later interment.

No other tomb contained any human remains. The most imposing of all lay half-way up the slope some distance to the north of Chapel 521. Here a shallow shaft, 150 by 100 cm. led into a rectangular chamber roughly 320 by 280 cm. in size, cut in the solid rock, but walled round with brick. In this was found a quantity of pottery broken into small pieces, the skull of an ox, and numerous head-plates of a large Nile fish (*Synodontis*?). There were two more chambers behind the first, but falls of roof had obscured their shape, and rendered their excavation difficult and dangerous. No chapel was found farther down the slope to which

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<sup>1</sup> It bore a royal name ending in  |, either Akhenaten, Sakerê, or Tutankhamûn.

this tomb could be assigned, and the same was the case with two other shafts still farther to the north, both of which proved never to have been finished. In this fact lies, indeed, the solution of the whole problem. The rock of which the ridge is formed is of the very poorest quality, friable and full of cracks and faults, totally unsuited to the cutting of regular rock tombs such as the Egyptian loved. Every effort had been made to find even small patches of suitable rock, not only here but also on the opposite slope of the main valley and the south slope of the branch valley, on both of which we found trial pits. Eventually the Egyptians seem to have decided that to dig tombs on the slope itself and to erect chapels over or in front of them was impossible. They therefore sank their shafts on the flat top of the ridge<sup>1</sup> at some distance from the chapels, which still continued to be erected on the slopes. For this reason the position of a chapel gives no clue to the whereabouts of the tomb-shaft, which may be a quarter of a mile away. A number of shafts on the plateau appear to have been rifled in comparatively modern times, and the few we re-excavated did not encourage further work in this direction, for they were completely empty, not even pottery or bones being found in them. The absence of bones and objects of any kind from most of the tombs is remarkable, and suggests that after the fall of the Aten heresy and the departure of the court to Thebes the bodies were removed thither for burial by pious relatives, if indeed they had not already been plundered and destroyed at the moment of the triumph of Amûn and orthodoxy. At the same time the fewness of the examples and the possibility that any tomb found empty by us may have been abandoned by its original excavators as unsafe, and thus never occupied, warn us against drawing any rigid conclusions.

#### DATE OF THE CHAPELS.

At el-'Amarneh most things belong to but one period, and our first impression was that the chapels represented the tombs of the more prosperous middle classes during Akhenaten's reign. The great rock-tombs for which the place is famous are clearly the graves of the rich official classes, in fact of the court; the tombs of the poor are doubtless mere shafts, yet to be discovered, in the sandy plain. It seemed therefore not unreasonable that in the newly found chapels we should see the intermediate class of tomb, built for the middle class families of Akhetaten in its palmy days. This view, however, experienced a rude set-back when in Chapel 529 a limestone door-post was found bearing a painted inscription containing the name of Amûn (Fig. 13), though in what context it was impossible to ascertain. Only a few days later this was followed by the finding of the inscribed entablature in the shrine of 525 (Fig. 14, next page), bearing a *htp dì nlswt* prayer to Amûn in which the god bears the titles "the good ruler eternally, lord of heaven, who made the whole earth."

This was a momentous discovery, since never before had the hated name of Amûn been found at el-'Amarneh. Our first impulse was to attribute the chapels to a pre-Akhenaten period, despite the king's boast to have founded his city in "a clean spot." But a fresh discovery soon suggested a more



Fig. 13. Inscribed door-post: Chapel 529. Scale  $\frac{1}{6}$ .

<sup>1</sup> An exception occurs in 555, where an unfinished shaft with steps lies immediately under the shrine.

reasonable explanation. In the shrine of Chapel 525 were found two very remarkable stelae (Pl. XXVIII, figs. 1-4). They were not set into the masonry but stood on the floor of the niche, leaning against its back wall. Both were in the left-hand or western portion of the niche, the smaller having its left edge at 108 mm. and the larger at 141 mm. from the left end of the niche. The position of the stelae does not give the impression that they were in their original place. The smaller of the two (21/528, fig. 4) is 250 mm. in height and 140 mm. in breadth, with a rounded top. On it is painted in

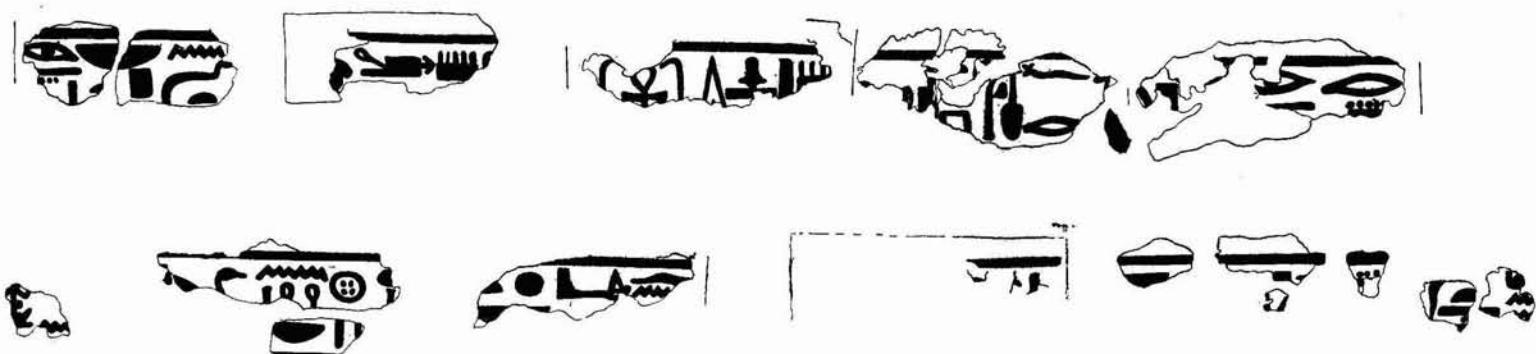


Fig. 14. Inscription to Amun from entablature of shrine in Tomb-Chapel 525. Scale  $\frac{1}{8}$ . The fragments in the lower row must be placed to the left of those in the upper.

red, yellow and black a representation of the god Shed, the Saviour.<sup>1</sup> He stands facing right, with his staff in the right hand and his bow in the left. In front of him on the ground is a disproportionately large scorpion surmounted by two vertical arrows side by side with the points downward. The surface of the stone is powdery, and the colours have faded badly. In front of the god's face is an inscription in black hieroglyphs. The following words were still decipherable at the moment of discovery: "Shed, the great god, lord of heaven, lord of the Two Lands, ruler . . ."

The other stela (21/527, Pl. XXVIII, figs. 1-3) is a much more imposing object. It is rectangular in form with a corniced top of the usual roll and cavetto type, painted in red, white and blue. Height 444 mm., breadth 324 mm., and thickness 120 mm. The scenes and inscriptions cover the front face and the two sides. The front is in the form of a shrine, the central space being slightly sunk and surrounded by a band of inscription above and on either side. Within this a painted blue band, curved at the top, gives the impression that the scenes are depicted on a round-topped stela set back in a shrine. The work is in sunk relief painted; the hieroglyphs are incised and painted blue, the lines which divide the columns being in red. In the upper register we see Shed facing to the right. He wears the curl of youth (black) and an *usekh* collar in blue and white. In his right hand is a staff painted white, with black stripes near the top end, in his left a bow coloured red, with black at the tips and centre and a red bowstring. From his shoulder hangs the quiver, blue with stripes of red and white. Above each elbow is a broad armlet in black and white stripes. On the right stands Isis facing him. Her right hand holds out a sign of life to his nose, and her left hand grasps another similar symbol. She wears a long dark red

<sup>1</sup> For Shed see *J.E.A.*, IV, p. 239; *A.Z.*, 49, p. 125; *Ann. Serv.*, XVI, p. 175; Erman, *Aegyptische Religion*, pp. 91 and 180.

cloak, a black wig, blue and white *usekh* collar, and yellow fillet, with a red head-dress. In front of her is a white vase-stand supporting a yellow vase with rounded top and a spout, surmounted by a lotus flower. In the centre of the picture, between the two deities, lies a large scorpion, above which are two vertical arrows with points downward. In front of Shed is written "Shed, the great god; may he give every good and pure thing to thy *ka*, even all kinds of food." In front of Isis we read: "Isis the great, lady of heaven, mistress of all the gods."

In the lower register we see on the right a figure in adoration before two white vase-stands loaded with offerings. On the left are three vertical columns of inscription reading "Giving adoration to Shed, kissing the earth to the great god; praise (?) to the lord of love in peace; beholding<sup>1</sup> thy beauty (?) every day. Made for him by Ptah-may."

The main inscription which surrounds the whole scene contains two very incorrectly written prayers, one addressed to Shed and the other to Isis. "An offering which the king gives (to) Shed the great god; may he give every good and pure thing to the *ka* of pure pure<sup>2</sup> even every kind of good food to the *ka* of the praised one of his lord. May he save<sup>3</sup> for him his head, may he hear him as often as he calls." "An offering which the king gives (to) Isis the great, lady of heaven, mistress of all the gods. May she give me life, prosperity and health in all happy length of life in her city at the end of the West in peace, for the *ka* (?) of Ptah-may."

On the left-hand side of the stela are two scenes. In the upper Ptah-may is seated in a chair on the right, holding a bowl into which a standing female figure pours a liquid from a small vase. The inscription above reads "To thy *ka*, O praised one of the Aten, from his brother (read sister), the lady of the house Thefy. Made by (?) Ptah-may, deceased." In the lower register one female figure plays a large harp to the sound of which another is dancing. The inscription appears to read "His daughter Heket (?); his daughter Neferu. The saying of every good thing (?)."

The right-hand side of the stela is similarly arranged. In the upper register is a scene identical with that seen in the same position on the left, with the substitution of a small boy for the offering-table. Above the figures we read "Thy *ka*! Spend thy happy day (*i.e.*, make merry), O praised one of the Living Aten; made by<sup>4</sup> the praised one of his lord the Living Aten, Ptah-may, repeating life." "The lady of the house Nubemshent (?) his son Khaemmenu." Below are four figures labelled respectively "His son, Khaemmenu;<sup>5</sup> his daughter, Bekist; his daughter, Bekist; his daughter, Heket (?), justified."

The significance of these finds is obvious. It has been generally understood that Akhenaten and his subjects at el-'Amarneh worshipped only one god, the Aten or Sun's Disk; yet here is a man who calls himself the "praised one of the Aten" making his funerary prayers not to the Aten but to Shed and Isis. The mention of the Aten makes it almost certain that the stela dates not earlier than the reign of the heretic. Are we then

<sup>1</sup> Read *oo* (?), a short writing of *misi*, to see.

<sup>2</sup> These words are an obvious error.

<sup>3</sup> An allusion to the god's name "The Saviour."

<sup>4</sup> *irn* is clearly the Relative *n*-Form here. In the parallel phrase on the right side the *n* is followed by another indefinitely made horizontal sign, perhaps an *f*.

<sup>5</sup> The scribe has omitted some of the signs.

to believe that the king allowed the inhabitants of the "Horizon of the Disk" to wander so far from the paths of monotheism as this? It is true that amulets of Taurt, of Bes, and of Hathor, and a stela of Taurt (see p. 25) have been found at Akhetaten. Even the worship of such deities as Shed and Isis might, one could conceive, have been tolerated.<sup>1</sup> But when we ask whether Akhenaten would have suffered Amûn or any god other than the Aten to be addressed as "Lord of heaven, who made the earth," we can answer with a very decided negative.

The conclusion is unavoidable that Chapels 525 and 529 at least date from the period of transition back to Amûn worship, probably from the reigns of Sakerê<sup>c</sup> and Tut'ankhamûn. It is hardly likely on present evidence that Akhenaten himself wavered in his later years, and on the other hand it is improbable that after the removal of Tut'ankhamûn's court to Thebes a sufficiently important settlement remained at el-'Amarneh to account for the erection of such imposing tomb-chapels. In any case a new fact in the history of the Disk heresy emerges, namely that the transition back to the worship of Amûn was not abrupt, but gradual, and that there was a time when the two opposed deities could be mentioned on one and the same stela.

Two other possible dating-points exist. In the refuse thrown out from a plundered tomb on the north end of the slope east of the village was picked up a fragment of mud jar-sealing, on which the signs  were legible. Moreover, from Chapel 521 came a fragment of a wine-jar with two lines of hieratic: "Year 16 (?); wine of the House of Aten . . . [the overseer] of the garden Semirem." It is unfortunate that the date is not quite certain, and in any case this piece of evidence is to be regarded with caution, for it is by no means impossible for an ostracaon from the village to have found its way into the chapels, even though the direction be uphill.<sup>2</sup>

Putting all the evidence together we are only justified in saying that some of the chapels are probably to be dated to Sakerê<sup>c</sup> and Tut'ankhamûn, while others may be, and probably are, earlier than this, extending quite possibly throughout the reign of Akhenaten himself. The two dated examples are both in the branch valley, and one might hazard the conjecture, though without enthusiasm, that those in the main valley are earlier. Very careful examination of the material which had been used for terracing, from which it was hoped to get some useful indication, proved without avail, and the contents of a small rubbish pit underneath, and therefore earlier than the east wall of the outer court of 524, proved when sifted to contain mainly charcoal and leaves without a single datable object. A deposit of similar appearance from beneath the flooring of the right-hand niche in 521 proved equally barren from the dating point of view. It is possible that an exhaustive examination of the made earth beneath the floors of the chapels will yield dated objects,

<sup>1</sup> It may be that some surreptitious worship of the old gods went on throughout, especially among the workmen of the village, who were slightly more removed from court influence than the people of the main town. At the same time the finding of amulets depicting deities such as Bes, Hathor, Isis, and even Amûn, hardly amounts to evidence for the worship of those deities; for these amulets had each their particular virtues from time immemorial and were probably worn for a special purpose almost without regard to what they actually depicted.

<sup>2</sup> The fragment of papyrus (21/334) mentioning the Aten, found between 523 and 524, may have been blown thither from the village, though it has the appearance of coming from a funerary papyrus.

ostraca for instance, which will give a *terminus a quo* for some of the buildings. On the last day of the 1921 excavation, moreover, while clearing the slope in front and to the south of 524, we came upon the shrine end of a chapel of more imposing dimensions than any yet excavated. Between this and the wall which bounds to the west the irregular complex of rooms south of 522 there came to light at a low level a piece of walling differently orientated both from those of the new chapel just referred to and from those of the complex. This may be merely part of the terracing works, but on the other hand it may be a portion of an earlier building on this site which further investigation would enable us to date.

#### DECORATION AND EQUIPMENT.

The deplorable state in which all the chapels were found prevents our obtaining much information as to their original appointments. In certain aspects they differ from all other Egyptian funerary buildings known to us. The tomb-chapel is essentially the place where the dead man, conceived, according to the naive philosophy of the Egyptian, as still in some physical sense alive in the tomb, comes to obtain the daily store of food and drink necessary to his existence and provided by his relatives. In the best tombs of the Old Kingdom we actually see the false door through which he comes forth, and indeed the statue of the man himself generally stands in front of the doorway. This is the arrangement usual in rock-tombs throughout the Middle Kingdom and on into the XVIIIth Dynasty, and some of the rock-tombs of el-'Amarneh are excellent examples. In the Middle Kingdom the stela with its painted or, more rarely, sculptured representation of the deceased had, in the mastabas, though not in the rock-tombs, taken the place of the false door and statue, and we can scarcely doubt that this arrangement prevailed in the tomb-chapels at el-'Amarneh. If this is the case—and the Shed and Isis stela of Ptah-may would seem to show that it is—it is remarkable that we have found neither whole stelae nor fragments in any other chapel.<sup>1</sup> At the same time it is highly probable that on the fall of the heresy stelae with representations of the Aten were removed from their tombs and broken up elsewhere in a sort of official holocaust, if one may use the term, as were the statues of the king himself from the great Sun Temple. This would explain the finding of occasional fragments of Aten stelae in the main town, though these may nevertheless have been non-funerary stelae used in family worship in the houses.

Another difficulty still remains. In the funerary chapel of the XIIth and XVIIIth Dynasties the stela is almost invariably built into a shallow recess in the wall of one of the chambers. No such recesses occur in any of the tomb chapels found at el-'Amarneh, and yet it is a little difficult to believe that an object so precious as the stela was merely leaned up against the back wall of the niche in the position in which those in Chapel 525 were discovered. Is it possible that it was built into the back wall of the upper part of the niche, which formed a sort of second recess above the cavetto cornice of the first, and which has in all cases been denuded almost out of existence?

These are questions which it is impossible to answer on present evidence. What is, however, clear is that in these chapels we have a type of funerary building which is without

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<sup>1</sup> The six stelae found in 1891 by Barsanti in the great rock-tomb of Any can hardly be quoted as evidence, for they are of an abnormal type. See DAVIES, V, pp. 9–11.

parallel in Egypt, where the shrine with such niches is entirely unknown. This is the more remarkable since the great rock-tombs at el-'Amarneh, in which one would most expect to find originality and variation from the orthodox type, are perfectly normal in design and form. It would therefore seem probable that the brick chapel with niches was merely a prevailing fashion among certain classes, and not a type of tomb specially designed for the performance of funerary ceremonies of an abnormal kind.

Very little remains of the original furniture, which was doubtless of a simple type. In 521 two plain rectangular limestone slabs each with a rim and runnel were found, Pl. XIV, fig. 5, top row, centre and r., 21/260, 21/261; these were probably small lustration-slabs rather than offering-tables. Other chapels yielded similar examples. Each chapel originally had a water-trough for purification purposes, and in the inner court of 525 a good example still remains. It is shaped like a T with a short stem, and is of roughly hewn limestone (Pl. XXVII, fig. 2). A still larger but shallower trough is seen in Pl. XXVII, fig. 3, standing in the space which separates 521 from 522. It is again of quite roughly cut limestone, and is rectangular in shape. In the second outer court of 552 are two troughs of mud brick sunk in the flooring and plastered and whitewashed. These, despite the unsuitable nature of its material, must have served the same purpose as the stone troughs elsewhere. An L-shaped piece of limestone, 21/360, Pl. XIV, fig. 2, 22 cm. by 15 cm. was found in 530, and is probably the angle of a doorway. Two similar objects came from 552. It is difficult to hazard a guess as to the use of the box-like compartments of brick plastered and whitewashed inside found in the inner court of 552 and in the outer court of 526. They may have been store cupboards, as were also perhaps the hollow benches in 551.

Let us try to imagine the scene in one of these chapels during the ceremonial. The procession of relatives winds across the plain and up the broad valley to the tomb. Before or on entering the outer court a lustration was probably performed, after which the party entered the chapel and took their places in the inner court on the brick bench provided for that purpose. The ministrant then purified himself once more at the trough in the inner court and advanced to the niche where, standing on the step, he probably laid the offerings of food and drink before the stela or statue, if either existed, of the dead man. On the back wall of the niche in 552 are painted on stucco representations of such offerings, a loaf, a lotus, and other objects now no longer recognizable, designed no doubt to serve as symbolical substitutes for the real objects in case of neglect. Meanwhile, on the small brick pedestals which stood on the floor of the shrine in front of each niche others were placing tables or vase-stands heaped with offerings and possibly surmounted by bowls of smoking incense. The stage is still set, though the actors are gone, in 524, where the pottery vessels used in the cult still remain near, if not actually in their original places (Pl. XXVII, fig. 1). Like all vases found in the chapels they were whitewashed, as were the walls and probably even the floors of the chapels themselves.

With the exception of the two stelae of 525, little was found to indicate exactly how the deceased was represented at the ceremonies performed for his benefit. In the inner court of 529, not far from the spot where lay the inscribed limestone doorway, were found two objects in wood, both slightly damaged by white ants. The first was a Sun's Disk with horns, diameter 113 mm. The disk was painted yellow and the horns blue. Almost touching this object was a rectangular pedestal of dark brown wood, round the sides of which ran

the words "Made by the servant in the kitchen, Nehemmaatiu" (Fig. 15, rough hand copy); "made by the praised one of his father(?), Nehemmaatiu." It was tempting to suppose that two objects found thus side by side should belong together, especially as the bottom of the disk was flattened and the pedestal a little longer than the diameter of the disk. Moreover, though the centre of the top of the pedestal was badly ant-eaten, the indications of peg-holes seemed to correspond to those in the bottom of the disk. We were therefore inclined to believe at first that the disk had been mounted on the pedestal, and that this was a form under which the Aten was worshipped in the chapels. This is certainly incorrect. The Aten is never represented at Akhetaten in any form except that of a disk from which descend rays terminating in hands. Moreover, we now know that Chapel 529 belongs to the period of the return to Amûn and orthodoxy, so that there is no difficulty in supposing this disk to have formed the head-dress of some large wooden figure of one of the old time gods, possibly Hathor. The pedestal is, however, much too small to have supported a statue of such size and must be part of another figure, the rest of which has perished.

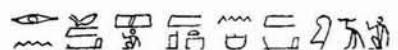


Fig. 15. Inscription from wooden statue base: Chapel 529.

#### DETAILED DESCRIPTION OF THE TOMB-CHAPELS.

In the preceding pages a general idea has been given of the appearance and arrangement of the most typical of the chapels. It is doubtful whether any good purpose would be served by printing here the complete description of each chapel contained in the Field Books. What follows is limited to what is necessary to make the photographs and plans completely intelligible. Pls. XXIV and XXV should be consulted throughout.

With regard to the position of the chapels it should be explained that the most northerly in the main valley is 555, which lies north of the north-east corner of the village, Pl. XXV. Next comes the group 551-554 and 556, which lie east of this same corner. Moving south along the east slope of the valley (Pl. XXIV) we reach 521 and 522, followed by a group of rooms hardly constituting a chapel, to which the number 523 was given. In front of, *i.e.*, west of this, is the still unexcavated 561. At 523 the chapels turn round to the east and extend on to the northern slope of the branch valley. The first group is 524-527; next come, still farther east but lower down the slope, 528-531, and still farther and lower 532-536. Chapel 537 is the most easterly and lies actually on the valley bottom. In the slope some 15 metres east of it lies a tomb which has been completely plundered. Chapels 540 and 541 lie in the bottom of this same valley at its junction with the main valley. They are insignificant in size and their walls hardly stand more than one course in height; they yielded no object of any importance.

#### CHAPEL 521. Pl. XXVII, fig. 4.

Outer court. Walled with rough stones, but mud-floored. Entrance to inner court up two steps, on the lower of which lay a mat of *fersî*-reed bound with palm fibre. Remains of pylon doorway with square towers.

Inner court. Mud floor. Usual brick bench along south wall and in front of east niche, also along south part of west wall.

Shrine. Consists merely of a portion of the inner court raised 13 cm. and partitioned off by a wall 35 cm. in height with rounded top. This shrine contains only three out of the four niches, the fourth, that to the south, opening direct off the southern extension of the inner court.

Of the three niches in the shrine the central is raised 65 cm. from the floor, and goes back 85 cm. Its breadth is 125 cm., but its doorway or opening is only 66 cm. across. At the back, at a height of 17 cm. from its floor, is a roll and cavetto cornice (the roll is clear in the photograph). Upper niche destroyed.

The north niche is of similar construction, but has a threshold or sill of four limestone slabs. Its roll and cavetto cornice begins at 30 cm. from its floor and ends at 45 cm., above which is the upper niche running back another 36 cm., but badly denuded. On the floor of the shrine at the foot of this niche is a stone step, 31 by 28 cm., and 19 cm. in height.

The south niche of the shrine is badly damaged. In the floor of the shrine in front of the niche is a stone step, and there is yet another step of stone and brick west of this again, half engaged in the raised floor of the shrine.

The fourth niche, that which opens direct out of the inner court, is at 70 cm. from the floor, and runs back 120 cm. Its detail is destroyed.

*Objects* : Two plain offering-tables of limestone, Pl. XIV, fig. 5, top, centre, 21/260, 21/261 : rough palette of slate with traces of green pigment, 21/275 : very rough wooden doll, Pl. XX, fig. 3, bottom, third from r., 21/267 : fragment of wood with three painted panels, 21/266 ; piece of board rectangular with rounded top, 21/262. Outside east wall an ivory lip-stud, Pl. XIV, fig. 1, centre.

*Pottery* : vi/1007 b, vii/1003 h.

#### CHAPEL 522. Pl. XXVII, fig. 3.

Outer court masked by 561.

Inner court. Bench as usual. Doorway in north side leads to a shapeless room between 521 and 522, containing a limestone tank 93 by 58 cm. and 22 cm. deep (see photograph). Pylon doorway with square towers with a heavy batter leads to shrine over a step 18 cm. high, formed of a wooden beam containing dowels, obviously a re-used piece, clear in photograph.

Shrine. In front of niche a dais 104 by 77, and 10 cm. in height. The single niche would be as broad as the shrine save for being shortened by the rough rubble wall which bounds it to the south. Its doorway is 93 cm. wide. Within it, unsymmetrically placed against its east and south walls is a mastaba- or bench-like structure, 188 by 58, and 51 cm. in height. This has a cavetto cornice on its west side and seems to take the place of the back wall of the lower niche in other shrines. Its upper surface thus forms the floor of what would be the upper niche in normal cases.

The rubble wall to the south of the niche continues up the slope, and is in fact a retaining wall built to hold back the sand during the building of 524.

*Objects* : Wooden bolt, Pl. XX, fig. 3, top, l., 21/307 : wooden disk, 21/309 : copper chisel, 21/312.

## CHAPEL 523.

A shapeless complex of rooms without feature of interest.

*Objects*: In passage between this and 524, small fragment of papyrus written in hieratic in black and red and mentioning the Aten, 21/334.

*Pottery*: xxx/1041.

## CHAPEL 524.

Outer court. Normal. About a metre within the south wall runs a portion of walling at a slightly different orientation, probably earlier. Thick mud floor.

Inner court. Bench 23 cm. high, and 39 from front to back. At north end of east wall a step with rolled top gives access to a passage along the east of the outside of the shrine, containing a flight of steps leading presumably up on to the hill slope above. At the north end of the west wall a doorway leads into a room lying west of the shrine.

Shrine. Pl. XXVII, fig. 1. Mud floor 15 cm. above that of inner court. In north wall three niches, and on the floor in front of these a step 4 cm. high, and 32 cm. from front to back, extending the whole breadth of the shrine. Central niche 58 cm. above step, lateral niches 52 cm. On floor of shrine opposite each niche and at 90 cm. from them a small whitewashed brick pedestal 25 cm. high. Opposite central niche two such pedestals side by side, the more easterly of which seems to have been disturbed.

Central niche has floor sunk 6 cm. below the level of its threshold, which is 18 cm. broad. Traces at back of cavetto cornice at 38 cm. from its floor. Slight traces of upper niche at 48 cm. from floor. On the axis of the niche, but nearer the back than the front, stands on its floor a small brick pedestal.

East niche runs back 110 cm. Cornice at back 38 cm. from floor. Above the cornice the upper niche runs back 50 cm. This upper niche was at least 20 cm. high, but no trace of its roofing is left. Its doorway is rebated to a depth of 3 cm.

West niche similar to east, but more denuded.

*Objects*: Alabaster finger ring with plain bezel, 21/529.

*Pottery*: 1004 d and f, 1052, 1052 b, c and d, I/1019 e, l and m, II/251, II/1034 c, v/1003 g, v/1031, v/1052, v/1057.

## CHAPEL 525.

Outer court. South wall consists of two huge stones and a rough brick wall. West wall is formed by the east wall of outer court of 527.

Inner court (Pl. XXVII, fig. 2). Bench to south, east and west, extended on east and west to fill up the rectangular spaces between the staircase and the walls. Large T-shaped water-trough, and very large boulder with flat top, lying on the floor 70 cm. from the foot of the stairs. This probably served as a pedestal; it is hardly conceivable that it found its way there by accident. Shallow circular stone bowl, Pl. XIV, fig. 6, bottom, 21/533.

Shrine. Eight steps with a low balustrade lead up from the inner court to a raised platform extending across the whole breadth of the chapel and apparently constituting the shrine. For the architectural details of this see above, p. 93. On this platform, at the top of the stairway, stood an inverted truncated conical pedestal, height 33 cm., diameter 34 cm.

at top, which is broken (see section Pl. XXV, top): projecting roll moulding round the base: whitewashed. Fragmentary remains of two niches.

West niche, breadth 87 cm., doorway 64, 58 cm. above shrine.

East niche badly denuded; depth from front to back 110 cm. It may possibly have contained two separate niches.

The east wall of shrine and niche is of rubble and runs farther up the slope.

This chapel is wholly abnormal. Its outer court is insignificant, and the shrine consists of a mere platform where probably the ministrant never actually penetrated. It may even be that this platform should be regarded as not shrine, but lower niche, with two or three upper niches above it. For a shaft possibly connected with it see above, p. 94.

*Objects*: Two stelae, 21/527, 21/528 (see above, p. 96).

*Pottery from chapel*: 1002 P, 1032 C, 1056, V/1052 A.

*Pottery from shaft*: 1002 R and S, 1015 C, 1016 F and G, XI/1063, XXVII/1062, XLIV/1061.

#### CHAPEL 526.

Outer court. No traces.

Inner court. An irregular space between 524 and 527, entered by a short flight of steps. Outside the side wall and between the stairs and the west wall of 527 is a dais two bricks high. In the north-east corner of this dais is a small rectangular enclosure 40 by 25 cm., hollow and whitened inside. Within the inner court in the north-east corner is an irregular four-sided room built up against 527, and west of it a rough stairway leading on to the slope above.

Shrine 50 cm. above inner court and reached by four steps. East of these steps, and built up against the shrine, but outside it, is a curious box-like structure 98 by 66 cm. and 60 cm. high, built of bricks laid on their edges. Within the shrine a bench in south-east corner. The niches are two.

West niche, 55 cm. from floor of shrine, 123 cm. from front to back. In front of it, on floor of shrine, two brick steps.

East niche. An L-shaped compartment entered by a door 52 cm. wide. Perhaps not strictly a niche at all.

*Objects*: Blue glaze earring, 21/538; rectangular wooden label with illegible hieratic signs, 21/539.

*Pottery*: 1002 Q; I/1019 K.

#### CHAPEL 527.

Outer court marked by row of large stones to south.

Inner court. Entered by short flight of steps. Walls of brick with a base of stones. Pavement of mud and stones. In north-east corner a rough rectangular enclosure containing a well-cut limestone basin (?) of diameter 40 cm., found upside down covering some fragments of charcoal and reeds. Rough stone steps lead to shrine.

Shrine. Badly destroyed. North half of flooring removed and large rubbish pit in north-west corner.

Niche. Large and to the east. Details destroyed, though a fragment of the much

narrower upper niche survives, at a level of 70 cm. above the lower. West of the niche a narrow passage, 140 cm. long, whose floor is 20 cm. above the top of the bench, gives access to an L-shaped room with floor 45 cm. higher, mostly cut in rock. Fragments of painted plaster were found in this.

*Pottery* : II/1034 B.

#### CHAPEL 528.

From its position looks like an extra forecourt of 529, but as it has its own niches this is improbable. In centre of floor are some irregular mud-plastered pits, outlined above the ground with stones. These, like the oven in the broken north-west corner, are probably later arrangements. Against the north wall at its centre is a solid block of masonry which once held the lower and upper niches, now almost destroyed. Sunk in this block is a vase 30 cm. in diameter. All along the north wall is a bench 70 cm. in height, which was perhaps originally a series of niches.

#### CHAPEL 529.

Outer court. Could only be entered from 528. Bench all round, an abnormal feature. Mud floor.

Inner court. 8 cm. higher. Two square column-bases on floor, possibly forming a colonnade to north and to south with an open aisle in the centre. On north buttress of doorway leading to shrine signs of a scene painted in red, yellow and black, and afterwards covered with whitewash.

Shrine. Floor of one course of brick with mud plaster.

Niche. This lay in a separate block of masonry built up against the east wall of the shrine, and inside it. Three steps led up to it, but the niche itself is denuded away.

*Objects* : Disk and horns in wood, 21/374, see above, pp. 100-101 : inscribed pedestal in wood, see *ibid.*

#### CHAPEL 530.

Outer court. Appears to be blocked up in front by the southern room of 528, through which however it must have been entered.

Inner court. Normal.

Shrine. Consists of an extension to the east of the inner court at a level one brick higher. No wall separated the two rooms, but the large square column-bases suggest that the shrine formed as it were a covered colonnade to the open inner court. The niche, now denuded away, was contained in a block of masonry built on to the east, outside the end of the shrine. In the shrine, in front of the niche, was the usual dais, one brick high.

*Objects* : L-shaped object of limestone, 21/360, Pl. XIV, fig. 2 : rectangular stone trough, Pl. XIV, fig. 6, 21/361 : stone bowl, Pl. XIV, fig. 2, 21/362.

*Pottery* : 1002 J, 1004 C, I/1019 F and J, XXXIII/1036 A, XLV/1037.

#### CHAPEL 531.

Little worthy of note. Much limestone used in the lower courses of the walls, especially to the south. Shrine separated from inner court merely by a wall with rounded top, 14 cm.

high. On its floor, immediately in front of the door leading into it from the inner court, is an inverted truncated conical piece of limestone, 40 cm. in diameter and 12 cm. high. This stood directly in front of the now almost destroyed niche.

#### CHAPEL 532.

Outer court. Formed by south wall of 533 to the north, and a stone wall to the south. Four steps with a balustrade lead downwards into the inner court, which is normal.

Shrine. Separated from the inner court only by a brick wall 45 cm. high, in which is a doorway 80 cm. broad. 50 cm. beyond this is a rough stone block, 27 cm. high, in the floor. A very narrow stairway leads up to the niche, which was built out behind the east wall of the shrine, but only the rough brick and stone walls which supported it remain.

#### CHAPEL 533.

Outer court. Approached by a stone-marked alley-way and three steps leading downwards. Divided by a longitudinal wall into a north and south half.

Inner court. Bench to west and north.

Shrines. They appear to be two, built inside the inner court, and distinguishable from it by their slightly raised floors. The niche to the north is normal and a little of the upper portion is preserved. The southern niche is badly destroyed, and indeed not sufficient remains to prove conclusively the existence of a true niche.

*Pottery.* 1004 E.

#### CHAPEL 534.

A small rectangular room north of the outer court of 535, containing an oven, and not yet fully excavated. Probably not a chapel at all.

*Object:* Female figure in grey stone, portion only, 21/536.

#### CHAPEL 535.

Outer court. Approached by an alley-way whose north wall is of brick, while the south is of stones. Entered over a threshold of brick with side-posts of limestone.

Inner court. Threshold of stone. Staircase of five steps with balustrade leads to a shrine of which only the outer shell remains.

*Object:* Limestone offering-table, 21/540.

*Pottery:* 1054, 1/1019 N.

#### CHAPEL 536.

Outer court. A mere alley-way bordered with large stones.

Inner court. Bench to north, south and west. Possible traces of staircase to shrine.

Shrine and niches destroyed.

To the south of this, poor remains bordered by a stone wall to the south suggest the existence of another small shrine.

#### CHAPEL 537.

The most easterly shrine dug. Little remains except outer shell. A plundered shaft possibly connected with it lies a few metres up the slope to the east.

## CHAPEL 551. Pl. XXV.

Like its neighbour 552, this chapel has a long axial passage with low walls running through its outer courts, three in number, and giving access to the inner court.

First outer court. In the northern portion of the west half a set of six rectangular compartments formed by bricking laid on the floor, now standing to a height of 7 cm. and perhaps never much higher. South of these a larger semicircular compartment.

Second outer court. In the west half a rough rounded stone embedded in the centre of floor, diameter 22 cm.; perhaps a column-base. Both halves of this court are entered over thresholds from the axial passage, as is also the case in the first outer court.

Third outer court. The western half is open to the axial passage. Circular stone vessel 22 cm. high in north-west corner. The eastern half is entered not from the passage but from the inner court behind.

Inner court. Bench along east side, 38 cm. high, also round part of west and south sides. This bench is in parts hollow, and mud-plastered on the inside; it was doubtless used for storage. On north wall traces of design in black at the point where the doorway joins the balustrade of the staircase.

Shrine entered by three steps of total height 45 cm. The north half of the shrine consists of a solid bench of brick in which are sunk three rectangular pits, the bottoms of which are 54 cm. above the flooring of the shrine.

The shrine was unusually rich in coloured decoration. Above the doorway ran a roll and cavetto cornice, the roll or reed in white with red ties, and the cavetto with petals of red, blue, green and yellow, outlined in black. Door-jambs white, but with a broad band near the outer edge, and a blue and black band ran horizontally across the building at the level of the top of the stair balustrade. Inside the shrine the roof had a vine pattern (Pl. XXXVI, fig. 2) coming down in a curve to a plain yellow cavetto with white roll below it. Lower still a conventional frieze of lotus petals, pale blue fading off to white, with black outlines and border band. Below this a line of red and yellow flame spots, and finally a chequer pattern in white, red and blue, with black outlines.

*Objects* : Jar-sealing, 173 : fragment of blue glazed ring-bezel.

*Pottery* : vi/73 and iii/192.

## CHAPEL 552.

This chapel, like 551, has an axial passage, with walls 35 cm. high, leading direct through its outer courts up a flight of steps into the inner court.

First outer court. East, west and south walls of rubble with traces of either a mud coping or further courses of mud brick above. Against the very low north wall a rectangular depression in the floor on each side of the axial passage. That to the west is 20 cm. deep, the other 10 cm. Both are whitewashed and are doubtless ablution places.

Second outer court. In the west half the two objects at the north end seem to have been either columns or altars. They are of mud brick plastered and whitewashed. A reconstruction is shown in Fig. 16 (next page). The bench or platform at the north end is 55 cm. high and has a coping of one brick along its edge. On the back of this stand the three engaged columns, now only 15 cm. high. In the eastern half of the court is a similar bench at the north end with two engaged columns.

Inner court. Bench as usual. West of staircase a compartment built up on the floor in the corner, 70 cm. high, in brick; plastered and whitewashed inside. West of this an

isolated limestone square pillar 45 cm. high. In the north-east corner of the room a niche 25 cm. above the floor, with roll and cavetto cornice in back wall at 67 cm., and an upper niche above this again. The staircase leads up from the inner court to the shrine, on the back wall of which is painted the design described above, p. 94. The walls of the niche are almost completely denuded away.

*Objects*: Broken limestone trough of rectangular shape (inner court); L-shaped object of limestone (inner court), and another from second outer court (*cf.* Pl. XIV, fig. 2).

*Pottery*: II/? (three), v/1052 A, v/1031 and v/1052 (four), vi/1 (or iv/1002 L), vi/261, vii/243, vii/244.

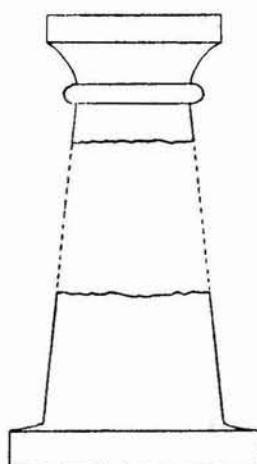


Fig. 16. Column or altar of brick: Chapel 552.  
Scale  $\frac{1}{20}$ .

#### CHAPEL 553.

Outer courts. Almost totally destroyed.

Inner court. Approached by a staircase with balustrade. Bench round three sides. There is no shrine proper, but three compartments open off the inner court. That to the east is entered up a flight of stairs. On its floor is a pedestal of brick 48 cm. high with a square depression in its upper surface, as if it had supported a square column. Remains of a painted stucco cavetto cornice were found here. The central compartment is 56 cm. above the floor of the inner court, and has a bench to the north 52 cm. above this. From the entrance probably came a roll and cavetto cornice in limestone. The west compartment is plain and has no bench. From here too came fragments of cornice.

*Objects*: Two limestone offering-tables.

#### CHAPEL 554.

Outer courts practically destroyed.

Inner court badly denuded. Remains of two square columns on the floor.

Shrine, badly denuded, consisted of three separate compartments each reached by a flight of stairs from the inner court.

*Objects*: Two limestone offering-tables.

*Pottery*: v/187 and vi/1004.

#### CHAPEL 555.

Outer court almost completely ruined.

Inner court. Normal, with bench.

Shrine. Bench 45 cm. high in east portion. This shrine partly covered an excavation in the ground, 160 cm. deep, almost completely filled with five or six large boulders. A rough stairway led down into it. It gives the impression of being an unfinished tomb-shaft.

*Objects*: Two limestone tables of offerings and a rectangular limestone slab of the usual type with two bars beneath, *cf.* Fig. 10, p. 62.

## CHAPTER V.

## MARU-ATEN, OR THE PRECINCT OF THE SOUTHERN POOL.

## THE NAME.

The original name of this site would seem to be Maru-Aten, "the Precinct of Aten," a phrase which recurs often on the inscriptions found here. What exactly this means, and why it should describe the peculiar collection of buildings which we found, is not very clear, and it appeared desirable to select a name rather more applicable to the character of the place. The discovery on one of the wine-jars from the *harim* of the phrase "The Southern Pool" used as a proper name gave us just what was wanted to describe a place lying right at the south end of the 'Amarneh plain and possessing as its most striking feature a large artificial lake; there are no archaeological grounds for connecting the name on the potsherd with the ruins, but its suitability was too obvious to be passed over, and we were quick to adopt it as a label, while keeping the more correct word "precinct" to define a complex for which it was difficult to find any other noun sufficiently non-committal.

The site lies behind and a little north of the modern village of el-Hawaṭeh, which is built over the ruins of houses of Akhenaten's time; for a long distance north of it the desert shows no signs of former buildings, and if such existed in the cultivation all trace of them has disappeared, so that one must assume that the el-Hawaṭeh ruins represent a quarter of the city of Akhenaten which was quite distinct from the part of the town that stretches from et-Til to the south end of el-Hâg Kandîl; but it was a quarter rather than a separate town, and as the high-set village of el-'Amâriyeh undoubtedly conceals old remains the distance separating the different parts may not have been so great as it seems to-day. It should be remembered that there are extensive ruins well to the north of et-Til, which again, though not directly connected with the central portion of the city, are yet not wholly disconnected from it, seeing that there are several isolated buildings and groups of buildings scattered between the main sites; it would appear that across the entire amphitheatre of flat land which lies within the boundaries marked out by Akhenaten's stelae one great town straggled along the fringe between desert and cultivated river-bank, and though the early discovery of a temple and palace in the centre of the arc has so focussed our attention on that quarter as to make it seem for us the city proper, of which all out-lying parts must be merely suburbs, yet this impression may quite possibly be based on erroneous and over-hasty judgments, and we may yet find that the extremities of the long and narrow strip were just as important and as rich as the middle of it.

## BIBLIOGRAPHY.

The el-Hawaṭeh site seems to have escaped the notice of Petrie, as it does not appear on his general map of the 'Amarneh district published in 1894. Attention was first drawn to it in 1896, when M. Barsanti excavated here and removed some panels of frescoed

pavement, of which the majority are now in the Cairo museum and others in Berlin; M. Barsanti did not publish any report of the work done by him, and the account of the technique of the frescoes given by von Bissing and Reach (*Annales du Service*, VII, p. 65) records the fact of their coming from a palace of Amenophis IV at Hawaṭeh without describing further the circumstances of their discovery. Baedeker (1902 edition) refers to an entirely destroyed palace of Amenophis IV at el-Hawaṭeh. DAVIES (II, Pl. I) inserts on his copy of Petrie's plan a note of a "small painted pavement" having been found north of el-Hawaṭeh. Timme in his survey marks the site as "Palastruinen," and on p. 23 describes it briefly as a rectangular ruin-field and illustrates one of the Berlin frescoes secured from it by Barsanti; he further notes the four high sand-hills which lie in a row south-west of the site, remarking that while they are certainly artificial there is nothing to explain their origin. In 1907 the Germans dug on the site for the short space of one rainy day, and their experiment seemed to them to prove (*M.D.O.G.*, 34, p. 28) that the palace walls were still preserved to a man's height and that its plan could therefore be recovered with certainty, and that the sand-hills referred to by Timme were the broken remains of an ancient dam or retaining-wall for an artificial lake.

#### EXCAVATION.

When the Egypt Exploration Society started work here on November 18, 1921, the site looked far from promising. The rectangular enclosure was indeed quite clearly defined by the ruins of its outer wall, but only in one place, and there only for a short distance, did a mound of any height give promise of the wall being well preserved; for the rest, a trench with a low bank of broken brick and sand on either side of it showed where the *sebâkh*-diggers had rooted out what time otherwise had spared. At the west end of the rectangle more disturbed ground marked the place where interior walls had been dug out for *sebâkh*; in its north-east corner the broken surface littered with fragments of painted cement paving showed where Barsanti had worked; to the south of this, a large and roughly square patch of ground in which the soil was almost wholly composed of stone chippings was obviously the site of a masonry building from which all the material had been removed in antiquity; the whole of the central part of the enclosure was a low-lying stretch of absolutely level soil, free of all signs of ancient remains, but cut up into squares by the mud partitions and ditches of modern cultivation. The line of mounds to the south-west was more instructive than the site itself; these were clearly not parts of a dam, but spoil-heaps thrown up while digging a canal or lake in the desert surface; and connecting them with the rectangle of low ground in the centre of the enclosure we were able to identify this as a lake surrounded by buildings and a boundary wall, a conjecture which excavation amply confirmed.

As work went on, the estimate of the site based on the result of the Germans' one-day experiment proved to be rather too optimistic. Only towards the south-east, where the walls of the two enclosures met, was the building preserved to any height. Everywhere else the *sebbâkhîn* had done their worst, and though here and there a wall-fragment might stand 0·60 m. high, it would soon break down to nothing at all, and a trench full of more or less clean sand running along a broken pavement edge, or simply a trench, was all from

which a brick wall could be inferred. The stone buildings had suffered even more severely, and in none was a single stone ever found *in situ*; all we had to go upon was the layer of cement spread over the surface of the sand to take the lowest course of masonry. The ancient Egyptian workman who carried off the stones of the heretic king's palace to re-use them in some more orthodox monument elsewhere, and the modern peasant rooting up mud-brick to manure his fields, had both done their work so thoroughly as to leave to the archaeological digger no more than the barest evidence of what they had destroyed. It is eloquent of the condition of the site that in two cases at least the limits of a building could only be fixed by the trees that had once grown in the garden outside; and it is a curious commentary on the relative permanence of things that under a few centimetres of desert sand we could find trees and plan the mud borders of the flower-beds where of massive walls there remained not the slightest trace.

#### THE SITE.

The site consists of two rectangular enclosures, Pl. XXIX, one double the size of the other, containing lakes, gardens and buildings. Properly speaking it is not a palace, because it is not a residence, but a royal pleasure resort, a "paradise," in which the buildings, important as they may be, are yet scarcely more than accessories to the water and the flowers. One of the buildings is a temple, one a summer-house, another either a *harîm* or a hall of audience or a combination of the two; there are the houses of humble employees and there is a magnificent entrance-hall, but there is no place where a king and his court could live. One can but suppose that Akhenaten resided in a palace in the central or northern part of the town, presumably in that discovered by Petrie, and that to this pavilioned garden he would come to spend high days or holidays, either being rowed in his barge up the Nile or driving his chariot, as the tomb reliefs often show him driving, along the broad road which ran through Akhetaten north by south and is now called by the villagers of el-Hâg Kandil the King's Highway, *sikket es-Sultân*.

#### THE ENCEINTE WALL.

The two enclosures lay side by side, with their longer axes roughly east and west. The northern measured some two hundred metres by one hundred, and the smaller about one hundred and sixty metres by eighty; a mud-brick wall, buttressed on the outer side along its entire length, surrounded the whole precinct and separated its two component parts.

This wall had been so terribly ruined by the *sebâkh*-diggers that little could be learned as to its character. In many places even its foundations had been removed, though the builders had laid them a good half metre below the original surface of the desert, and it was thus impossible to say whether or no there had been gateways in it; one certainly suspected such in the middle of the east wall of the southern garden, where two large sand-filled pits projecting from the wall line might well mark the emplacement of gate-towers removed bodily by the *sebbâkhîn*, and at this point too there was no single brick left of the wall itself; but if a gate is here inserted on our plan it is only by conjecture. In the northern enclosure again there may have been a gate in the eastern wall, which in many places is too much ruined to allow of proof one way or the other, but there was

certainly none in the other three walls except the small door on the south opening into the southern garden just behind the great court of entry; and though this may seem, and is, but an insignificant approach to so luxurious a place, yet for once privacy may well have been preferred to display, and we would not suggest a second entry, for which there was no evidence at all in fact.

In the south-east corner of the southern garden there were found close up against the footings fragments of coloured plaster which, as there was no interior building here, or at least none more important than a potting-shed, must have fallen from the wall itself. If so, we may imagine that the whole inner face of the enceinte wall was brightly painted with naturalistic designs in which trailing vines with purple clusters played a leading part, while above them, separated by bands of black and yellow, was a cavetto cornice decorated in the conventional way with vertical petals of red, blue, green and white. The evidence for the character of the wall is indeed scanty, but it is if anything more than one would have expected to obtain from a building in so ruined a condition, and considering that for a large part of the circuit the very bricks had entirely disappeared, it is less rash than it might seem to reconstruct a decorated wall from a few bits of coloured plaster found in one corner only.

Just outside the east wall of the southern garden a discovery was made which throws a curious light on the building-methods of the period. Thrown away here were quantities of cement casts of bits of inscription or sculpture (22/330, 22/331, Pl. XXXII, figs. 3 and 5). These were moulded from existing stonework, in small sections at a time, and occasionally bore traces of colour; the rounded edges and backs of the several lumps showed that they were never themselves intended to form part of a building. The only explanation is that these are patterns. An immense amount of building was being done in Akhenaten's time, and the number of skilled workmen must have been inadequate; on the other hand the king's religious prejudices had so narrowed the *répertoire* of the decorative artist, that both the reliefs and the inscriptions of any one of his buildings might equally well belong to any other, and those of any one part of one building to any other part of the same. With inexperienced carvers, then, and with a servile repetition of design, it was expedient as well as possible to make casts of decorative elements executed by trained men to serve as models for the untrained at work elsewhere; and even colour hints might be added for the benefit of the painters.

Farther to the east lay rubbish-heaps formed by the workmen employed in the building. These consisted for the most part of stone chippings and fragments of pottery, none of any interest. The only object of importance found here was a fragment of alabaster intended for carving with cartouches outlined in red ink, 22/220.

#### THE ENTRANCE HALL. (VIII on Plan, Pl. XXIX.)

The main, if not the only, entrance to the precinct lay at the west end of the southern enclosure, where there was a large stone building standing directly on the high road. This was found to be in a greatly ruined state, and it was only from the marks left by the masonry blocks on the bed of cement which served as a foundation that we were able to recover the plan; fortunately, however, there were a number of stone fragments, column-drums and capitals, overlooked by the workmen who carried off the building-material for

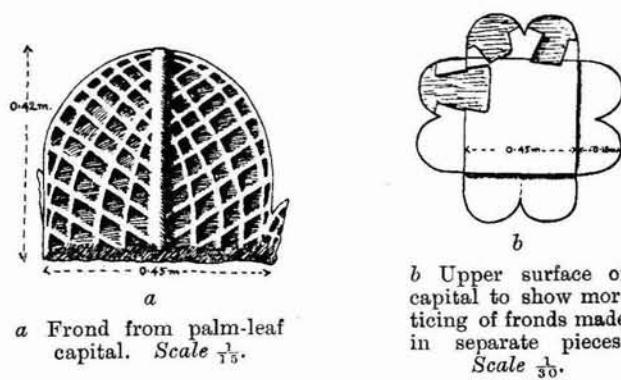
re-use elsewhere, which were of great assistance as illustrating the character and ornamentation of the building.

The entrance hall proper was a large court containing four rows of columns, nine columns to a row. Judging from fragments (see Pl. XXXII, fig. 6; XXXV, figs. 8 and 11; XXXIV, fig. 4, and the attempted restoration, Pl. XL), these were adorned with scenes of the king and his family engaged in the worship of the Aten; on the walls were reliefs showing the king going in procession or receiving tribute, stock subjects which we find constantly on the walls of the tombs. The column-capitals were in limestone, of the palm-leaf type, the surface of the leaves being cut into cloisons (as if to give the veining) which were filled with coloured paste (Fig. 17). This is a cheap imitation of the splendid capitals which adorned the northern palace (see PETRIE, Pl. VI), where the inlay was in faience and the edges of the stone cloisons were gilded; here a soft paste was used and the stone was but painted yellow. All through this building there was a lavish employment of paint to conceal a real poverty of material and slovenly workmanship; apart from one fragment of a red granite statue, all the rest was of limestone or the poorest quality of sandstone, and nowhere did we find traces of the elaborate inlay which enriched the sculptures and inscriptions of the little temple in the northern enclosure; only bright colour redeemed the rough cutting of hieroglyphs and uraeus cornices. An interesting point constructionally was the use in the foundations of large blocks of concrete cast in moulds and measuring 1·50 m. by 0·60 m. by 0·35 m.

To the north of the main entrance-hall there lay a smaller columned court; to the south of it, a small central room with no columns, at the back of which there seems to have been a throne or altar; east of this was a long court with a double row of columns supporting its roof, and behind it a little chamber reached from the central court by a passage running along the western wall of the whole building. Where even the ground-plan could be recovered only with difficulty, it was impossible to find evidence for the character and use of the different elements of the building; its position shows that it was the entry to the precinct as a whole, and the central hall, which probably had a door in its east wall opening on to the garden, seems to have been the entry proper; but for the rest we can venture no hypothesis.

#### THE SOUTH GARDEN.

Immediately behind the hall of entry lay a small lake, and on either side of and behind this stretched garden ground planted with trees and shrubs. The only other buildings (VII on plan) in the enclosure were two houses at the extreme east end close to where a break in the line of the outer wall suggests a gateway opening on to the desert; one of these was a house of moderate size and apparently of more or less normal type, though it was so badly ruined, as well as being complicated by alterations or rebuilding, that the plan



a Frond from palm-leaf capital. Scale  $\frac{1}{15}$ .

b Upper surface of capital to show morticing of fronds made in separate pieces. Scale  $\frac{1}{30}$ .

Fig. 17.

was not easy to make out; its main feature was a central court with columns; the other was a workman's cottage. In the rest of the enclosure no more digging was done than sufficed to prove the general character of the place, and as soon as trees had been found on the higher ground surrounding the rectangular depression, which experience in the northern enclosure had already shown must represent a lake, work was stopped.

The only entrance to the northern enclosure was by a rather small door in the dividing wall, just beyond the Hall of Entry; from the main road one passed through the great columned hall and turning to the left found oneself in front of the gate to the more private and, as its buildings showed it to be, the more important section of the precinct. But since the great entry was intended for royal ceremonial, there was also, between the north side of the court and the wall dividing the two gardens, a narrow lane ending in a small doorway giving on to the road; coming in by this, one arrived unostentatiously at the same gate to the north garden as faced the visitors using the state entry.

#### THE WESTERN GROUP. (VI on Plan.)

All along the west wall lay a row of small houses which can only have been those of the workpeople employed on the precinct. Those to the north were constructed with a solidity unusual in houses of the type, while on the contrary those to the south were, judging from the scanty ruins of them that survived, more than usually flimsy. The northern houses of the row differed from the workmen's dwellings of our valley site, and also from those found by the German excavators in the main city (*M.D.O.G.*, 34, p. 20) by having alongside of each a narrow yard with outbuildings; in two of these we found dead cows, and in another room there were nine dead dogs; it would almost seem that there was here a sort of home farm run for the benefit of those using the pleasure-gardens, and one thinks of syllabub! Apart from the animal remains, there was nothing remarkable about these houses.

The whole of this utilitarian quarter was discreetly hidden from the gardens by a long wall, and for part of the way by two parallel walls enclosing a road which must have afforded access to the garden through a door at its north end, and to the quay, while it also served the needs of a building which, backed against it, projected forward into the garden and reached nearly to the lake's edge. This building again, is of the type of workman's cottage, boasting only the minimum of four rooms, but its solid walls and its columned central hall set it in a class apart from those familiar to us from other parts of the 'Amarneh site; it is certainly of a domestic character, and one can only surmise, from its superior style and its isolated position in the garden itself, that it was the house of the overseer of the king's gardeners employed in Maru-Aten. Nothing was found in it to confirm any such supposition.

#### THE LAKE AND GARDEN.

The greater part of the northern enclosure was taken up by a rectangular lake, some 120 metres long by 60 metres wide and about a metre deep, its sloping gravel sides lightly puddled with Nile mud. It is from this lake, and from the smaller one in the south enclosure, that all the material came which forms the line of great spoil-heaps standing up south-west of the site. A lake such as this, however useful for irrigation purposes, must have been intended mainly for an ornamental feature of the garden and for the amusement

of the garden's frequenters; it has, of course, its precedent in the artificial lake which adorned Amenhotp III's palace at Thebes, and is but a very much enlarged edition of the garden pools with trees about their margin which were common in the country houses of the XVIIIth Dynasty nobles. Amply deep enough for the light, painted pleasure-craft of the Egyptians, and shallow enough to have no dangers for the least skilful wet-bob in the royal *harîm*, this lake must often have been the scene of such gay picnic parties as we see illustrated on the walls of many New Empire tombs.

#### THE QUAY. (V on Plan.)

From the wall screening the western range of employees' houses a long stone quay or causeway ran out over the low garden ground and projected into the water. It had a low breast-wall on either side and at its end a small building, probably in the shape of an ornamental gate, decorated with painted reliefs; on the fragments of this, 21/315 to 21/329 (322 B is figured on Pl. LXII), we could identify scenes of Aten worship, of running soldiers and foreign captives, Pl. XXXIII, fig. 1, probably both from a tribute scene, boating pictures, and, on a much smaller scale, one of the perspective plans of palace or temple, such as are common in the tombs; with these went reeded columns with palm-leaf capitals, a palmette frieze on a cavetto cornice, and the inevitable frieze of uraeus snakes. From the doorway a flight of steps seems to have led down to the water, and half-way along the quay other steps went down to the flat garden ground on the west border of the lake.

#### GARDEN.

All round the lake stretched the garden. Wherever we dug we found just below the surface either the straight mud ridges which divide flower- or vegetable-beds and cut them up into compartments for irrigation, or else the remains of trees. As there is little nourishment in the desert soil, a hole was dug down and filled with imported earth; this earth was mounded up, and round it was built or plastered a mud wall, circular and rising like a flower-pot to a height of anything up to sixty centimetres (according to the size of the tree) and rounded off at the top into a neat coping (Pl. XXXI, fig. 2); these mud tubs are still regularly used in Egypt, and, represented in section, they appear in ancient Egyptian drawings of trees, e.g., in one of the pavements from the Water Court (Pl. XXXVI, fig. 3, top); in DAVIES, I, Pl. XXXII (tomb of Meryra), there is a garden full of such, having not a little in common with the Precinct of the Southern Pool.

#### BUILDING III.

Scattered amongst the trees and flower-beds were three other buildings or groups of buildings. One of these, lying against the south wall of the enclosure, was a house of mud brick forming three sides of a square, a ground-plan unusual in Akhetaten. It was unfortunately much ruined; the southern rooms, of which alone the walls were tolerably well preserved, showed by their well-cut stone thresholds and remains of painted plaster that they had been of some consequence; of the two projecting wings only the cellarage remained, and that in so ruinous a state that even the plan could not be made out with certainty, but over the cellars, on a level two or three steps above that of the southern chambers, there must have been large and pleasant loggias looking out over garden and lake. In the

quadrangle between the wings there was a small square tank where once the lotus and papyrus grew; the impressions of their stalks and leaves were innumerable in the light water-laid mud which overlay the thick bed of heavy soil at the tank's bottom.

#### BUILDING IV.

On the north edge of the lake stood a building which, though constructed in mud brick and much ruined (the walls nowhere stood more than 0·50 m. high), proved to be of no little interest. It was approached from the west by a long walled and brick-paved passage communicating, probably, with the pathway from the quay along the western screen wall. It consisted of three courts, one behind the other, all flanked by smaller chambers. The front or western court had its roof supported by six columns (the stone bases of which were found *in situ*) set in two rows, and between them a narrow flight of stairs led to a raised platform (Pl. XXXI, fig. 1). We were at first inclined to believe that this was a stepped altar like that figured in the tomb of Panehesy (DAVIES, II, Pl. XVIII), but an altar would surely have been so placed as to let the ministrant face the rising sun, whereas the platform stands against a solid brick wall behind which lie two more walled courts; it seems therefore more likely that we have here a raised throne in a hall of audience such as is shown in the reliefs of the tomb of Meryra (DAVIES, II, Pl. XXXVIII); in the picture the throne stands on a low dais reached by a flight of steps, and above it is a light canopy or baldachin behind which is seen the sun's disk with its rays ending in human hands; in the ruins, the dais widens at the top of the steps, making room at its outer angles for the slender shafts that would support a canopy, while the blank wall behind it presents an admirable ground for a painting of the Aten, which to the spectators would appear in the east with its rays descending on and around the person of the king. The dais, as shown both by the remains and by a relief line corresponding to the steps on the outside of the balustrade, was 0·85 m. high; the steps (only 0·08 m. high) were painted red, the slope on either side of them white and blue; the interior of the balustrade walls white, the outside white and blue with a line of red moulding in relief following the stair angle; the front of the balusters had horizontal stripes (0·04 m. wide) of green, red, and blue on white framed with vertical red lines. On the walls, the cement facing was white below, then, over a black line, yellow and (apparently) broad bands of red and blue; a few fragments, probably from high up, show traces of more elaborate designs. Door-frames were of white picked out with blue lines. South of the front court was a large room having the deep recess with raised floor which in the private houses of the city characterises the "master's bedroom." The walls were cemented and the mud floor in part at least coated with white lime. This may be the king's withdrawing room, such as there is reason to believe was required for the ceremonial of the Aten worship.

The cellars on the north side have brick floors and limewashed (not cement-faced) walls.

A door on the north side of the throne leads to the central court, which also presents most unusual features. It is virtually peristyle, having a row of six columns down either side and two smaller columns in the middle of the western end; but the roof which they supported extended over the corridor only, leaving in the centre an hypaethral space. This space was enclosed by a 0·20 m. high brick coping, mud-plastered and rounded off along the top, built against the stone column-bases: inside, flanking a central walk entered from

the west, were low mud compartments filled with garden mould. The whole thing anticipates in a curious way the courtyard of a Pompeian house. The walls, faced with cement, were painted white up to about 0·40 m., then, over a black line, yellow, plain below and higher up covered with spot-and-bar patterns in blue, black and red, and with grape and pomegranate designs and rectilinear panels.

The central court is flanked by small cellars, but next to the entrance door on either side is a staircase with stone threshold and single door; treads, 0·15 m. high, limewashed. There is no visible turn to the stairs: if so, the cellars were only some 1·20 m. high; but there may have been a second flight over the adjoining cellar.

The back court has three rows of four columns each. Mud floor. Cemented walls painted much as in other courts, but here there is a good vine-pattern with green leaves and red stems and tendrils and black fruit on a yellow ground. (*N.B.* This might possibly come from the ceiling, supposing that also to have been cement-faced: cf. the ceiling decoration in tomb-chapel No. 551, Pl. XXXVI, fig. 2); pomegranate or pumpkin motives recur, and other unrecognisable elements. Door-frames were white on the inner face, on the room side picked out with yellow, blue and black lines; the ceiling had a cement cavetto moulding decorated with petal design in blue and white; the columns were faced with cement and had blue hollow flutings against red.

The door of the cellar immediately to the right of the entrance to the back court had been walled up with brick, and as if for greater security a big slab of stone had been set against the face of the blocking wall; the opposite cellar seems to have been similarly closed, for though the brickwork in its doorway had been destroyed a stone slab corresponding to that on the south stood tilted forward just in front of the door and had almost certainly once served to seal it. There was nothing to show why these two cellars had been put out of use—whether they had contained treasure or whether (as we fondly hoped!) this was some drama of the *harim*—unless it was that in the northern chamber there was found against the east wall the body of an infant roughly buried there with its toy pots of alabaster, its beads and amulets, 22/216. About the original contents of the other two chambers on the north side of the back court there was, however, no doubt at all; their floors were covered with broken wine-jars and mud jar-sealings, showing that here were two of those well-stocked cellars that figure in the tomb drawings of the royal palace; from these two little rooms and from the north-east corner of the court (into which the fragments had overflowed) we recovered over 280 stamped sealings and 130 graffiti (see pp. 161–68). The sealings all bore such labels as “Wine of the house of Akhenaten,” “Wine of the Temple (or ‘Mansion’) of Rê” or “of Sehetep-Rê,” “Wine of the Western River,” “of the Southern Pool,” “of the Storehouse of Tribute”; it is tempting to see in either of the last two titles allusions to the actual ruins with which we have to deal, but it is by no means permissible to do so. The graffiti give the usual supplementary details about the jars’ contents—the vineyard, the name of the vineyard superintendent, the vintage date, etc., “very good wine.” They were certainly no “dry” entertainments that Akhenaten gave in the Precinct of the Southern Pool.

In view of the extent of the cellarage and the importance of the two flights of stairs, it is clear that the main private rooms of the building were on the upper floor, which as a general rule was reserved for the women’s quarters, as in the houses of the town and as

in the palace of Rameses II at Medinet Habu. The dimensions of the present building do not give space for suites of residential apartments, but there may well have been here the private rooms of the royal ladies who figure so prominently at the king's audience, or a kind of *harîm* summer-house for those taking part in the court excursions. This would be quite consistent with the use of the entrance-hall on the ground floor as a Hall of Audience. The fact of the building being of mud brick constitutes no objection to the theory of its importance. Mud brick is the normal material for the wealthiest houses and even for the temples of Akhetaten: as long as the surface was brightly painted an Egyptian cared little for what lay beneath. But in this case we have a form of decoration never yet recorded elsewhere at el-'Amarneh in the employment for the wall-facing of a fine white cement whereon coloured designs are painted *in tempora* (not in fresco, as is the case with the pavements), and this unique feature fully warrants us in attributing to a comparatively small building the dignity of an audience chamber or of a *harîm*.

#### THE WATER-COURT. (I on Plan.)

Westwards of the *harîm* flower-beds and a grove of trees planted in fairly regular rows stretched up to the wall of a structure which occupied the north-east corner of the whole enclosure. This remarkable building was entered by a door set rather to the west of the middle of the south wall; it consisted of one long room, probably not very lofty, with a single row of pillars down the centre and a passage running all round it and across it in front of the door: the middle of the room, within the passage, was taken up by a series of T-shaped tanks, the crosses of the T's being to north and south alternately, so that between the arms of each pair there was left a small central square which formed a column base. The sides of the T's sloped outward from the bottom to meet in a sharp ridge rising some fifty centimetres above floor level, while along the passage they formed a low parapet wall with a vertical outer face; these sloped sides were mud-plastered, and up to floor level they were painted plain white with narrow yellow bands accentuating the corners, and up to this level they were filled with water; then came a narrow black line and above it, in bright natural colours, low-growing water-plants, water-lilies and lotus-flowers, while above these, near the top of the ridge, there was a trellis-work painted in red, blue and white on the grey mud, and vines with heavy purple clusters and red pomegranates showed up against a yellow background. The painted plants seemed to grow out of the real water, and the tanks with their many angles formed a sort of maze out of which the pillars sprang to support the roof. The same floral designs were repeated on the vertical sides of the parapet bordering the passage, and the cement floor of the passage itself was decorated in a series of frescoed panels with gaily coloured lotuses, rushes, papyri, and all manner of flowering plants out of which ducks started in flight or heifers plunged amongst their foliage, Pls. XXXVI to XXXIX. Every inch of this building, which was constructed in mud-brick throughout, was covered with a very bright and effective scheme of decoration; but if one examines it in detail one is conscious of a great lack of originality. There is a vast amount of mere repetition: the pavement artists, though skilful in their brush-work, had a very limited range of subjects, and in nearly every case these were borrowed from the similar pavements in the northern palace—indeed, there can be little doubt that the same workmen were employed on the two buildings; the designs on the lowest part of

the walls, which alone are tolerably preserved, repeat each other to satiety, and judging from the fragments of the upper designs these were identical with what we find in the *harîm* and even on the enceinte wall of the precinct itself. Like so much of the work of the period, this betrays a real poverty of imagination and resource going together with great technical facility, a good sense of mass composition and in the treatment of detail a curious alternation between an almost meticulous elaboration and an almost slovenly impressionism; but though there may have been faults in its execution, the general effect of the Water-Court must have been gay in the extreme. It is rather an anticlimax to record that in the bottom of the tanks at the western end we found masses of broken wine-jars with mud sealings and graffiti (see pp. 161–68) similar to those from the *harîm* and only a little less numerous.

In the construction of this building, the whole area intended to be occupied by the water-tanks was excavated and thereafter a very solid lining of brickwork and the brick cross-divisions were put in: a brick flooring was also laid down as a foundation for the cement of the frescoes. When found, the south wall of the building had been almost completely dug away by *sebbâkhîn*, and the position of the west wall could only be deduced from the remains of pavement on one side and the tree-roots on the other. It is from this building that M. Barsanti removed the fresco panels now in the National Museum, Cairo, and at Berlin: these have not been published. In the plan (Pl. XXXVII) the Cairo fresco panels (distinguished by the letter C) have been drawn in in their probable positions<sup>1</sup> with the idea of recovering as far as may be the original scheme of decoration of the hall.

At the east end of the hall, the two pillars against the arm of the first tank were strengthened with timber let into the masonry: in that flanking the south passage, three parallel beams lying north and south were built in at floor level: in the pillar in the angle of the tank there was a regular framework of timber thus (Fig. 18). The balustrade wall which bordered the tanks on the side of the passage was finished off with a painted coping, moulded in mud, of which a small fragment was found (Fig. 19).

#### THE TEMPLE AND KIOSKS. (II on Plan.)

From the door of the Water-Court a path between flower-beds ran south exactly on the axis-line of an important group of buildings lying east of the lake, the only group in the enclosure with which we have yet to deal; but though this path shows that there was some direct communication between the two buildings, the true approach to the new site was from the south, where an avenue

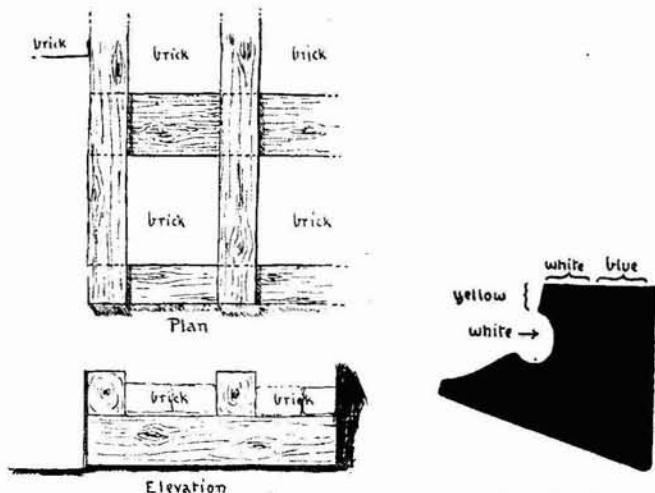


Fig. 18. Timber construction in brick pillar: Maru-Aten I.  
Scale  $\frac{1}{10}$ .

Fig. 19. Section of mud coping to parapet of tanks: Maru-Aten I.  
Scale  $\frac{1}{10}$ .

<sup>1</sup> As no record of the discovery is available the Cairo panels have been restored in the positions which their measurements and the state of the site in 1922 render probable. There is no doubt that the formal peta design, e.g. Piece 16, was used only in the cross passage.

of trees led to a lofty pylon, the doorway of a small temple. The axis of the temple lies east and west, and the doorway is therefore in the centre of the side wall of the outer court; this disposition, though unusual, is not without precedent at Akhetaten itself, and is here rendered necessary by the fact that the pylon building serves as entry not only to the temple but also to the group of three buildings directly north of it, which were approached by another door through the second pylon. These were surrounded by a moat with flat bottom and sloped sides, once filled with water, and must have been reached by a bridge of which no traces now remain; the central building lay to the north and was a stone version of the garden-houses commonly found in the gardens of private houses in the city, and the path to it was flanked by two small summer-houses with open pillared façades.

This whole group of separate but obviously interdependent buildings had been of solid masonry, and a great variety of stones, including many of rarer types, had been used in what must have been a very rich scheme of ornament. Later kings of Egypt had destroyed the work of the heretic and had carried off its material for use elsewhere, and nothing could have been more thorough than the way in which this was done. Before we started digging the site was merely a litter of stone chippings and sand: about forty centimetres below the surface we came on the foundation, a thin bed of cement spread over the sand to receive the masonry; but not a single stone remained in position, and very few of any size had been left behind at all. In the dried-up ditch we hit upon two fragments of capitals and two broken column-drums, a piece of a lintel and half-a-dozen sculptured wall-blocks; but for the most part our finds were limited to bits of monuments wilfully smashed up or flakes chipped off when stones bearing obnoxious figures or inscriptions were re-dressed upon the spot. At first we despaired of obtaining any idea at all of the buildings' original form and character, but when the cement foundation was cleared and swept we discovered that the very completeness of the destruction was in our favour.

Under the hot Egyptian sun the cement foundation dried before the first courses of masonry could be laid, and for their bedding fresh mortar had to be spread over it; when the house-breaking gang pulled up the stones, either this mortar remained behind, bearing the exact impress of each block, which could therefore be planned in by us as certainly as if we had found it *in situ*; or else the mortar came away with the stone, leaving the foundation bare, and in that case another factor came to our help: for on its smooth surface the Egyptian architect, using a blackened string, had laid down all the lines of his plan for the builders to follow, and these lines, where not covered by mortar, remained visible and sometimes as distinct as on the day when the taut string was lifted and let fall again on the still soft cement.

By planning the position of all the stones of which the marks were visible, and utilising the hints given by the architect's guiding lines, and by a careful study of the few remaining fragments, it was possible to reconstruct with tolerable certainty not only the ground-plan of the four buildings but, in part at least, their elevation (see Pl. XXX). We have then a small temple of normal type with its outer or pylon court, its roof supported by, probably, four columns, leading to a pronaos and beyond that to a little inner shrine with four columns close up against its walls and an altar or throne at its east end. The columns of the outer court were of the type figured by Petrie in his work on the northern palace (PETRIE, Pl. VII), but even more magnificent, Pl. XXXI, figs. 5 and 6; the lower drums were of alabaster with

inlaid lotus patterns: the sandstone shafts were reeded in broad and narrow ribs and painted green, while horizontal bands of bright yellow advertised the king's name and titles; above this came wreaths of red grape-clusters and green laurel leaves, and higher still, against a yellow ground, ducks hung head downwards, painted in their natural tints: the capitals were of alabaster adorned with lotus leaves and flowers carved in relief and inlaid with blue and green paste. The lintels over the doors were of alabaster (Fig. 20, and cf. the restoration on the plan-title Pl. XXX); the walls were covered with reliefs and inscriptions enriched with inlay in coloured stone and faience; only a few small fragments of this work survive, but from the inner shrine we secured the beautiful inlay heads of the king and queen illustrated on Pl. XXXV, figs. 1 and 2, wherefrom we can gain some idea of the wealth of skill and diversity of material that were lavished on the adornment of this chapel royal.

The "canal" that islanded the three other buildings of the group was merely cut in the hard sand, with sloping sides and flat bottom (see section on Pl. XXX); that it had been filled with water was shown, first by the filling along the north side, where a mud-brick



Fig. 20. Section of alabaster lintel:  
Maru-Aten II.  
Scale  $\frac{1}{10}$ .

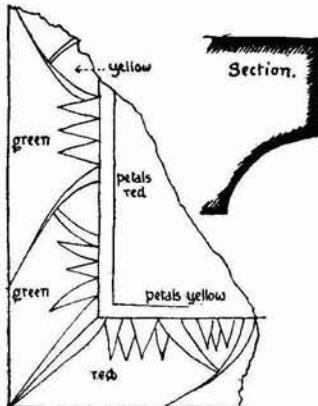


Fig. 21. Limestone pilaster-capital. Scale  $\frac{1}{10}$ .

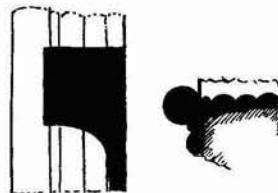


Fig. 22. Sections of reeded door-jamb with attached lintel. Scale  $\frac{1}{10}$ .

wall had been thrown over into the trench and its débris, instead of preserving the forms of the broken bricks, had disintegrated and gave all the appearance of water-laid soil; and secondly by the construction on the south side where, to meet the possible undermining by water-action of the heavy temple pylon, the foundations of this had been carried down in solid masonry to below the level of the trench bottom and thereafter the stonework faced with sloped brickwork.

Of the buildings on the island, the two that flank the pathway to the kiosk were exactly similar in ground-plan and probably similar in decoration also: each was a pavilion consisting of a single room with solid back and side walls and a comparatively open front. At each front corner was a pilaster, and two other pilasters framed the doorway: between the door and the corners the wall was shown (by the architect's laying-out lines) to be but a thin screen. The ground measurements of the pilasters agreed precisely with fragments found on the spot decorated with long-stalked lotus-flowers (Fig. 21), and the door-jambs may be illustrated by a fragment (Fig. 22) of a reeded shaft with a cornice attached: for the screens it is tempting to restore the stelae of red quartzite sandstone and alabaster (Pl. XXXII, fig. 2, XXXIII, fig. 2, XXXIV, figs. 1 and 2) covered on both sides with inlaid figures and

inscriptions, of which many fragments were found (Fig. 23) capped by cavetto cornices of the same material inlaid in palm-leaf patterns with coloured pastes. The floors were covered with slabs of stone, probably alabaster : the interior seems to have been encrusted with faience tiles figured with flowering plants. Very many fragments were found of friezes of brightly-coloured uraeus snakes bearing the sun's disk : these probably ran round the top of the buildings as well as above the doors.

The kiosk stood on a slightly raised platform and was approached by a long flight of very shallow steps with a low coping wall on either side (Fig. 24). The building itself was square and possessed no internal features other than a raised base for an altar or throne facing the door ; the roof was supported by columns engaged in a high screen wall reaching almost to the top of the shaft and leaving little more than the capitals free. These columns (Pl. XXXI, figs. 3 and 4) had reeded shafts and spreading palm-leaf capitals, painted green ; the inner face of the screens was adorned with conventional reliefs representing scenes of Aten worship, etc., but the outside was covered with naturalistic designs, plants, palm- and acacia-trees,

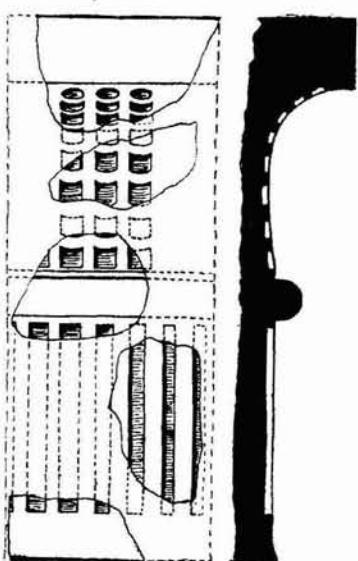


Fig. 23. Elevation and section of red sandstone cornice.  
Scale  $\frac{1}{4}$ .

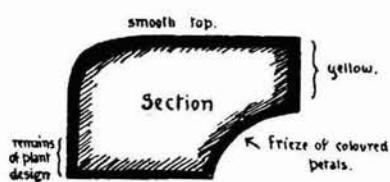


Fig. 24. Section of coping stone.  
Scale  $\frac{1}{10}$ .

lotus-flowers growing out of the water, heifers plunging among water-plants, lions and ducks, all clearly intended to harmonise with the out-of-door character of this island site set in a garden (Pl. LXII). From this building, apparently, came the friezes of uraeus snakes carved in red or yellow sandstone with inlaid heads of black granite and crimson eyes, and perhaps too a black granite stela showing the royal family worshipping the Aten ; but the screen wall and the engaged columns were all that we could identify with safety as coming from this particular shrine, and judging from the simplicity of its plan there was but little else to come from it ; all that it may have contained of rich ornament on altar, walls or floor, has been sedulously removed, and the spoilers were so anxious to overlook nothing that they tore up the pavement below the altar and dug deep down into the desert sand in search of the treasure it might conceal.

The cement foundation was considerably larger than the building itself, and on it parallel lines had been laid down by the architect well outside the walls : between these lines there were, on each side of the kiosk, four circular holes made through the cement while this was still soft and going down some 0·20 m. into the hard sand below it ; our first idea was that these were for scaffolding-poles used in the construction of the building ; but it is far more probable that they were for the flagstaffs which regularly adorned Egyptian shrines.

#### THE ROYAL KENNELS.

One building remains to be dealt with, but it lies outside and west of the precinct<sup>1</sup> and

<sup>1</sup> In the plan Pl. XXIX it is marked with the figure of a dog.

is of a very different character from the splendid shrines just described; even the poor houses of the Eastern Village were not so flimsily walled, nor had rooms so inadequately small for human use; we wondered what this hovel could be doing here by the king's pleasure-garden, until we found that indeed it was not a house at all. In two of the box-like compartments lay tumbled together masses of greyhounds' bones—there were nearly thirty, between old dogs and puppies—and there could be no doubt at all that this insignificant little place was really nothing less than the royal kennels!

#### THE TOMB PLANS.

It is interesting to compare these pleasure-gardens as a whole with the elaborate designs given in the tomb reliefs, especially in the tomb of Meryra (DAVIES, I, Pl. XXXII). It cannot be pretended that the Egyptian draughtsman shows us anything at all resembling the plan of the ruins that we have found: perhaps, as seems to be the case with the plans of the palace and the temple, he was content to portray water and trees, store-houses, garden-houses and shrines, giving a conventional representation of what he knew to be there without troubling to remember exactly whereabouts they lay or quite what each looked like; perhaps he was more true to life than one is prone to suppose, but the original of his drawing has yet to be unearthed elsewhere: but the general idea of the garden with its buildings remains the same, and there are a good many resemblances even in details, so that with the sculptor's perhaps fanciful and certainly childish design and the tangible though only too fragmentary ruins to help us, we can reconstruct tolerably well this Petit Trianon of the 14th century B.C.

#### INSCRIPTIONS. (*Cf.* pp. 147–158.)

The personality of Akhenaten has made so strong an appeal to modern interest that no new fact about him can be considered unimportant; and from the el-Hawaṭeh ruins we have been able to recover not only a vivid picture of how the pietist king took his pleasures, but also a new and unsuspected light upon the domestic life which he paraded with such insistence.

Here, as elsewhere, the inscriptions, like the sculptured scenes, are of a monotonous uniformity; the titles of the Aten and of the king are repeated *ad nauseam* with the conventional epithets and praises, and on all the monuments Queen Nefertiti was represented as sharing in the act of worship and taking a place second only to that of the royal ministrant. But here, as nowhere else, the queen's name has in nearly every case been carefully erased and that of her eldest daughter, Meryt-aten, written in palimpsest upon the stone, her distinctive attributes have been blotted out with cement, her features re-cut and her head enlarged into the exaggerated skull of the Princess Royal. This alteration is most thoroughgoing in the case of the little temple and the island kiosks—a group of buildings which seems to have been called “the Shadow of Rê”: in the entrance hall (VIII) it is limited to the more conspicuous places, but the intention clearly is the same. The ownership or patronage of the precinct was transferred from mother to daughter either during the

former's lifetime or on her death. But Nefertiti, if alive, could hardly have agreed to so public an affront, nor would her death have been seized upon by so devoted a husband as an occasion to obliterate her memorials; are we to suppose that things were not so happy as they seemed in the royal household, and that a quarrel so serious as to lose the queen her position put an end to the idyll which had long been the standing theme of the court artists?

## CHAPTER VI.

## THE RIVER TEMPLE.

OUR attention was drawn to the site by stories emanating from el-Hâg Kandil of two inscribed door-jambs having been found some years ago in a sand-hill just south-west of the village: one of them had been sold to a dealer, one sent to the Cairo Museum, but the carved lintel was said to be still lying under the sand. The tale was so circumstantial that I employed a few men for half a day testing the ground; they did not find the lintel, but chips of limestone, quantities of mud brick bearing traces of blue paint, and a Cypriote pot-sherd, showed that there was here a building which might be of interest. The villagers then told me of stone columns buried under the north end of the same mound, and explained that these had once been exposed by the German excavators in the course of an experimental dig. With this information it was easy to identify the site with that briefly described by Borchardt in *M.D.O.G.*, 50 (1912), p. 8, as "the remains of a large Egyptian building in the construction of which there were used not only material from private houses of the time of Amenophis IV, but also stones out of what was clearly a temple or palace of the later Ramesside period."

Seeing how important a later occupation of Akhetaten would be for its bearing on the question of Aegaean chronology, the mention of Ramesside remains seemed amply to warrant a more thorough investigation of the site. The mound is that on which the south half of the modern village is built; the only part available for excavation was a strip lying between the house walls and the cultivation; it was dotted with palm-trees and on it were two sheikhs' tombs, one well preserved upon its north-east limit, one in ruins in the middle of the site; but fortunately our relations with the villagers were sufficiently good to smooth away all difficulties, and even the exposure of the worthy sheikh's bones raised not the slightest demur. But it was not an ideal site.

We started by re-clearing the northern area already dug by the Germans but buried again under some three metres of wind-borne sand, intending to work south towards the promised lintel. As, however, the north end proved disappointing, and further progress was barred by a belt of palm-trees whose removal would have been an expensive matter, all the men were shifted to the south end, in order that this area might be explored independently, and the palms destroyed and the two sites joined up only if results seemed likely to make this worth while. This not being the case, work was stopped altogether. Our plan is therefore quite incomplete—necessarily so, for part of the building had been destroyed by a modern *sâkiyeh*, part by cultivation, and a great deal of it was covered by the village and the sheikhs' tombs; but even of the comparatively free area not all was excavated, and no junction was ever effected between the two sections that were cleared. The reason for this was that hardly any objects of importance were obtained from what was a very laborious piece of digging, nor was there likelihood of obtaining any by carrying the work

farther; but on the other hand we had, before closing down, secured just that historical information the hope of which had induced us to begin.

I have quoted above the report of the German expedition which prompted me to start work at the north end of the mound. It is invidious to criticise the methods of one's predecessors, especially when these have gained for themselves a reputation for thoroughness and skill which makes criticism look like jealousy; but as I have to describe this site I cannot pass over in silence the worst piece of archaeological field-work that has ever come to my knowledge.

On removing the drift-sand which filled the pit dug by the Germans' workmen, I found the site to be exactly as shown in the photograph published in *M.D.O.G.*, 50, fig. 3, except for the fact that most of the small stones there shown lying on the ground and all the small stone casing round the column shafts and bases had been carried away, presumably by the villagers after the excavations had stopped. My next observation was that in many cases mud brick showed up in the sides of the cutting, and that wherever it did so the brick-work had been hacked right into instead of being properly exposed, and that the three stones visible *in situ* in the left-hand bottom corner of the German photograph formed a threshold, but lay in meaningless isolation, the wall in which the doorway had been having totally disappeared. As soon as our work advanced beyond the limits of the German dig, walls were found everywhere, heavy walls of good brickwork, 0·90 m. thick, and still standing to a height of from 1·70 to 2·00 m. Where the German work ran along the line of any of these walls, its face had been ruthlessly hacked away; where a wall had run across the open it had been dug clean out, foundations and all, and only its jagged ends marked the limit of the devastated area. The German photograph proved that the destruction was due to the excavators, not to the villagers.

It is but fair to say that digging on this site was not the simple and straight-forward matter that it is in the town houses out in the desert, where the covering of drifted sand and dry brick rubbish falls away almost of itself from the standing walls and he would be a clumsy workman indeed who should fail to distinguish between the two. Here the buildings were buried in their own debris, the site had been under cultivation, and constant moisture had solidified the fallen rubbish until it was of the same consistency and of much the same appearance as the standing brickwork. Our Kuftî foremen, experienced though they are, found their skill taxed beyond its limits and needed careful coaching; often they had to leave a doubtful place alone until the sun should have dried the surface of the cutting and thrown into relief the mortar joints of the walling, or shown that what had seemed a wall was really but a mass of fallen stuff wherein the whole bricks which had inspired doubt were lying out of the straight or with loose soil beneath them and therefore at haphazard. The difficulty was increased by the fact that the wall surfaces were rather rough and their roughness hidden by an unusually thick coat of mud plaster, as much as ten centimetres thick, and as the painted decoration had very seldom survived to guide us the plaster generally had to be removed before the wall could be recognised as such. But after all, it is largely because excavation is difficult, requiring careful supervision and much patience, that field archaeology ranks as a profession. Without patience and supervision, digging on an ancient site is sheer destruction; and Borchardt, or his assistants, faced with the normal difficulties of the craft, did in fact destroy everything they encountered except the solid

stone. Plate XLII, figs. 1 and 2, shows the same naked area as appears in the German photograph, but I have drawn in on it, in white lines, the position of those walls which were standing before Borchardt started work,<sup>1</sup> as they are restored on the plan, Pl. XLI, and the contrast is eloquent. Indeed, not only the walls, but the floors too had vanished, for our predecessors had dug through them deep down into the virgin sand; but as soon as we left their area two early floor-levels of laid brick and of beaten earth were found in a good state of preservation. Such having been the character of Borchardt's field work on this site, I need hardly apologise if I deal rather cavalierly with his conclusions when putting forward my own.<sup>2</sup>

Our excavations represent a relatively small part of a large building of which the north (and more important) end lies under the modern village, and the whole of the west side has been destroyed by the cultivation: our plan shows only the south end of the east side, and probably does not even extend to the axis of the building. From this mere patch it was not easy to get an idea of the original character of the site, and there was little to help us apart from the ruins themselves. Needless to say, we did not find the sculptured lintel promised us by the villagers; but we did find the threshold which they had mistaken for a lintel at the precise spot whence they had said that the door-jambs were removed, and it was evident that these had been of stone. The present whereabouts of the missing lintels I have been unable to trace.

In front of the door whose jambs had so unluckily disappeared, and in six of the other rooms here in the south, we found, lying on the lowest floor-level, chips and fragments of inscribed limestone (*e.g.* 22/406, 22/407, Pl. XLIII, figs. 1, 5 and 6), all of the Akhenaten period. Fragmentary though the inscriptions were, it can safely be said that they were not of the sort which we find in the ordinary house-ruins of the city. The same thing is true of the fragments found built into the later constructions or high up in the filling below late floor-levels: these include parts of sculptured scenes drawn out on a large scale and familiar to us from parallels in the tombs, *e.g.*, the queen driving (22/401, Pl. XLIII, fig. 3), suppliants before the king (22/402, 22/404, Pl. XLIII, figs. 2 and 4), squads of troops (22/403), and parts of heavy building-blocks bearing cartouches etc. on a large scale, all of which are suited to a temple or a palace, not to a private house. Moreover, the plan of the place, though so incomplete, is clearly quite unlike the stereotyped house-plans of Akhetaten; many of the rooms were mere cellars, opening only from above, and a large part of the complex is really basement supporting a platform on which the main building stood. This building may have been a palace; it is far more likely to have been a temple.

One chamber (Room 38), with columns and altar *in situ*, was a shrine in the latest period of the building; but as its walls were of the time of Akhenaten (the stonework was not), it may possibly have been from its origin a side-chapel of a larger temple, and this is made more probable by the fact that whereas its floor remained virtually at the XVIIIth Dynasty level, the floors of the rooms to the south and east contemporary with the last

<sup>1</sup> The dotted white lines mark the limits of the German excavation.

<sup>2</sup> My criticism is not intended to apply to Dr. Borchardt's work at el-'Amarneh in general. On the house sites his architectural work, which alone can be judged from the preliminary reports hitherto published, seems to have been excellent.

phase of the shrine chamber had risen above that level by a metre or even a metre and a half; these rooms were presumably priests' quarters and store-rooms, and as such would be more often pulled down and rebuilt, their floors rising in the process, while the shrine being permanent would, as Herodotus remarked, be left in a hollow.

That the brick walls were of the Akhenaten period was shown in the north section by the XVIIIth Dynasty pottery found on the lowest floor-level associated with them, and in the south by the inscriptional evidence. These walls in some cases remained in use throughout the whole occupation of the site, in others they were destroyed or buried and new walls were erected on the upper floor-levels, these again either falling out of use in their turn or serving the needs of later occupants in remodelled quarters. In our plan the different conventions are intended to show the construction-date of each wall, and the later buildings can only be understood if it be remembered that large elements of the earlier were incorporated in them. The date of these later buildings (not their character) was what gave to the site its chief interest.

The shrine in its final form consisted of a small (original) mud-brick court with two columns and, against the back wall, a large stone-paved altar approached by a flight of stone steps, Pl. XLII, fig. 2. When first found the columns had been encased in rough masonry (*M.D.O.G.*, 50, fig. 3), but this has since disappeared: the shafts were in three pieces (the top drums missing) giving a total height of perhaps three and a half metres; they were only roughly worked, and obviously were intended to receive a coating of plaster; the capitals, judging from one found by the Germans at the south limit of their work<sup>1</sup> and by two small fragments found by ourselves, were unusually splayed examples of palm-leaf type, Pl. XLII, fig. 3; the two bases were not a pair, that on the east being a well-made base of regular XVIIIth Dynasty type, while the other was a rough disk of totally different workmanship and date. In the middle of the paving of the altar-top there was a large limestone block bearing a much-damaged cartouche of Ramesses III, Pl. LVIII, H.C. 157: it was presumably this stone that prompted the Germans to describe the shrine as rebuilt with fragments of a late Ramesside temple or palace.

That description is, of course, exact, but it would be rash to argue from the presence of a single portable block (it measures 1·10 by 0·40 by 0·20 metres) that there was ever a Ramesside building in the neighbourhood: stones were freely transported from one site to another,—as, *e.g.*, Horemheb is said to have carried off to Thebes a vast quantity of worked stones from Akhetaten itself,—and this block, if it gave us no further information, might just as well have come from any other place along the river as from el-'Amarneh. Fortunately, however, it does not bear the cartouche alone; the deeply-cut but half-obliterated Ramesses inscription is itself a palimpsest, and beneath it can be traced faint signs of an Aten text (see p. 160). This clinches the matter. The Aten text makes the stone a native of Akhetaten, and to imagine that it was carried off to be used in a Ramesside temple elsewhere and that that temple was destroyed and used as a quarry and that this particular stone was brought back by some later builder to its original home, is to push coincidence too far; and we are driven to the conclusion that the Ramesses III temple was at el-'Amarneh, and that in all

<sup>1</sup> We have only native report for the provenance, the capital not having been published by its finders.

probability it occupied the same site as the Akhenaten temple and as the later shrine in which the re-used block from it was found. The probability was strengthened by the discovery in the room just south of the shirne (No. 35), immediately on the second floor-level, of fragments from a number of large amphorae of light clay painted blue all over, which were of a form regularly associated with the XIXth and XXth Dynasties (Type XLIII) : these must show occupation of the chambers attached to the Akhenaten temple just at the time when we suppose that to have been remodelled by Ramesses III.

There was no inscriptional material for dating the shrine in whose altar the dishonoured monument of Ramesses found itself laid side by side with sculptured blocks from Akhenaten's older building : for this we had to depend on less direct evidence. In the rooms lying east of the shrine three principal floor-levels corresponding to three occupation-periods were easily to be distinguished. At the south end of the mound, in spite of subsidiary alterations, there were equally evident three main periods, which it was natural to associate with the three given us by the shrine itself. In Room 8 a square basement chamber of the Akhenaten building had been in the next period turned into a circular granary, in the construction of which part of the old walls had been cut away ; later the granary in its turn fell into disuse and disrepair, and over its ruins there formed a rubbish-heap of broken pots thrown out from the neighbouring rooms : all the sherds in this heap which could be dated at all were of definitely XXVIth Dynasty types.

Now nothing corresponding in date to this has as yet been found in the eastern part of the city site, where most excavation has been done ; but in the Eastern Village we came upon plundered coffins of, approximately, the XXIInd or XXIIId Dynasty, p. 76. There was nothing to explain their presence, but the tombs from which they had been carried cannot have been far from the village, and were probably some of those late tombs which the Germans dug in the next valley. This is no proof of their belonging to people living close to the village, or even in the el-'Amarneh neighbourhood ; at the present day the cemeteries that stretch between el-Hâg Kandil and el-Hawaṭeh are largely used by quite distant villages on the far bank of the Nile. The same might be said of the XXth (?) Dynasty coffin found in house P.47.5 (*M.D.O.G.*, 52, pp. 8-9), but the argument must not be pushed too far, and the Germans also report the discovery, apparently in the same neighbourhood, of stelae of the late New Empire, which could hardly be explained away in the same manner. We have in our temple definite evidence of occupation both in the XXth and in the XXVIth Dynasties, and, especially in view of these other hitherto disconnected finds, it is but reasonable to suppose that the occupation was continuous.

When then did it begin ? In Rooms 4 and 6 there are large stone column-bases which seem to be in position, but certainly do not belong to the building in which they occur ; they do not align with the walls, and the base in Room 4 lies not in the centre but in the corner of the room, and the wall actually runs over the edge of the stone and must have been built when the latter was already there and already disused. The walls are of Akhenaten's time, and the column-bases are certainly older than the walls ; but it is impossible to say by how much they are older : great changes can take place even within the short space of twenty-five years, and we are by no means prepared to affirm that we have here proof of pre-Akhenaten buildings. The discovery in Room 9 of a Thothmes III scarab does not help us ; the object was found well above floor-level, it is portable and durable,

of the sort that can never be considered to give good evidence for a building, and scarabs of this particular king were commonly used—and manufactured—very many years after his death. All we can say is that the necessary priority in time of the column-bases to the walls, and the existence therefore on the site of a building older than one which we know to be of Akhenaten's date, must be taken into consideration. Akhenaten's own claim to have founded his new city in an absolutely clean spot has been discussed by Borchardt (*M.D.O.G.*, 50, p. 9) and by Peet (*J.E.A.*, VII, pp. 172 ff.), in the light of their discoveries made chiefly in the eastern houses of the town, and neither has been able to settle the question. We have not settled it either, but personally I am of opinion that no evidence of real value bearing on the point is likely to be forthcoming from the inland quarter of the city area; if there was an earlier settlement it was probably a small one and almost certainly close to the river: only when Akhenaten made the place his capital did the builder encroach far on the desert, and only excavations in or near the cultivation will throw light on an earlier history of the site.

The same is true of its later history. There is no doubt at all that when Tut'ankhamûn shifted the seat of government back to Thebes Akhetaten fell into decay: all the nobles and the wealthy people left, the artisans finding their occupation gone followed them, and none but peasants would remain behind to till the fertile river-banks. One cannot suppose detestation for the heretic city to have been so strong as to cause good land to be left uncultivated in a country where it is so scarce. There must have been a permanent agricultural population, but they would live not in houses far inland but close to their work, probably on the sites of the present villages; in time they would require temples, if only to witness to their reversion to orthodoxy, and it is really not surprising to find that our temple, once consecrated to the Aten, remained in use under succeeding dynasties as a shrine of the conventional cult.<sup>1</sup>

#### DETAILED REMARKS ON ROOMS, ETC.

ROOM 1. Pl. XLII, fig. 4. Staircase, seven treads left, total height 1·45 m.; at foot, stone threshold (broken) solidly embedded in cement and cut to receive jambs (missing). On and just above floor-level many fragments and chips of carved and inscribed limestone, e.g. 22/407, Pl. XLIII, fig. 6.

ROOM 2. Stone threshold: foundations for the stone jambs which were removed by native plunderers, according to the current story. On the floor, quantities of limestone chippings with remains of inscription and one large fragment, 22/406, Pl. XLIII, figs. 1 and 6: also quantities of mud plaster painted a plain light blue; it was found all over the room and probably was fallen from the ceiling.

ROOM 4. The stone column-base is older than the room, since the west wall actually runs over the edge of the stone. In the room were many fragments of mud plaster painted blue

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<sup>1</sup> For the bearing of these discoveries on the dating of the Aegean pottery from el-'Amarneh, see *J.E.A.*, VII, pp. 182 ff.; VIII, pp. 69-70.

with, in a few cases, bits of gold-leaf adhering; these probably were fallen from the ceiling, but see Rooms 5 and 6. Also found, a fragment of imported Cypriote vase with concentric circles (low down, but not on floor-level).

Room 5. Against the wall, low down, fragments of blue-painted mud plaster, and of inscriptions in very fine white plaster applied to a mud-brick surface, the characters partly moulded, partly finished by hand (very fragmentary).

*Pottery*: IV/98, IV/99.

Room 6. Original doorway between 5 and 6 subsequently bricked up: rooms therefore re-used, perhaps when the bin was constructed in north-east corner: this still stood 1·70 m. high and was entered from the south across a sill 0·30 m. high. Pillar-base, 0·25 m. high, probably older than the walls. In filling, miniature cartouche of Akhenaten in limestone, 22/425.

Room 7. Found in filling, scarab 22/420 (Fig. 25), a few fragments of inscribed limestone, and many sherds.



Fig. 25. Scarabs from River-Temple. Scale  $\frac{1}{2}$ .

Room 8. Circular granary cut down 0·20 m. below (original) floor, partly destroying the east and north walls: this granary was destroyed and a mass of pottery rubbish filled it and overran its ruined south and south-west sides to the walls of the room proper (the north-east side stood from 0·85 to 1·10 m. high, the south-west side was destroyed down to floor-level). The pottery, all of XXVIth Dynasty types, includes fragments of at least three imported Cypriote pilgrim-bottles, including 22/422 and IV/90, VI/259, VII/83, XIX/100, XXV/88, XXXVIII/91, XXXVIII/250, XLIII/105, LIII/92, 93, 102, LXI/84. In the whole stratum, 0·30 m. to 0·60 m. thick, sloping from north-west down to south-east, there was only one XVIIIth Dynasty sherd: this was a piece of blue-painted Akhenaten ware which had been broken and mended in antiquity. With the sherds was a fragment of a pot in dark steatite, and a rudimentary *ushabti* figure in alabaster, height 0·15 m. Also, very high up (0·50 m. above pottery stratum and 0·60 below the top of the existing wall), the inscribed limestone block 22/402, a fragment of a limestone roll cornice, and a limestone cap.

Room 9. *Objects*: Scarab, 22/418, Fig. 25, and two clay lamps, red ware, LIII/94, 95.

Room 10. *Objects*: Two cowrie shells; lump of obsidian; pots, VI/97, LIII/96.

Room 12. Entirely occupied by a granary (late) lime-plastered, the floor 0·90 m. above that of Room 5; this had been later divided by a cross-wall.

Room 15. Pot (intact) of pinkish-drab clay, LX/82.

Room 16. The middle of the room occupied by a (late) circular bin 0·85 high. Built into the wall, at ground-level, by the south jamb of the door to Room 15 was the inscribed block 22/411.

Room 19. Floor-level roughly the same as that of rooms 15-17, and therefore some 0·50 m. above that of the southern chambers (5 etc.). In it a circular store-pit, lime-washed inside, late, going down to within 0·60 m. of original floor-level.

*Pottery*: VI/101, L/106.

ROOM 21. *Objects*: In the north doorway, limestone relief, 22/408; inside, glaze grape-cluster pendant, 22/416.

ROOM 22. *Objects*: LXVI/108.

ROOM 24. Limestone fragment, 22/409. Pl. XLIII, fig. 5, found high up in filling.

ROOM 25. A cutting in the south-west corner showed five distinct floor-levels occurring thus:

- A. Lowest floor-level.
- B. At 0·80 m. above A.
- C. At 1·10 m. , ,
- D. At 1·45 m. , ,
- E. At 1·75 m. , ,

The west wall of the room belonged to floor-level B and was re-used in all the succeeding periods. In the centre of the room was a brick-lined and stone-floored circular granary (originally domed) which must belong to period E or later: its sides still stand 0·70 m. above floor-level E, and were originally at least 0·50 m. higher.

Between levels B and C, scarab 22/419, Fig. 25: in pit and filling, v/103, xix/109, LXV/107: embedded in the floor of the granary, limestone relief, 22/401, Pl. XLIII, fig. 3.

ROOM 26. *Pottery*: ix/110.

ROOM 27. Three floor-levels distinguishable:

- A. Lowest floor.
- B. At 1·30 m. above A.
- C. At 1·80 m. , ,

The walls traced belonged to C period only, and the east wall rests on a rough rubble course of re-used stones, amongst which the block 22/412. Above C level, in filling, fragment of glaze inlay, 22/417 A.

ROOM 29. Base, with only sandalled feet preserved, of small limestone statuette.

It should be remarked that in this southern area the floor-levels rise in the various rooms from south to north. This is the case with the original floors, which to some extent follow the natural ground contours; but also the northern rooms have been more built-over and rebuilt, and our work was not in all cases carried down to the lowest level. The inscribed material found in rooms 1-7 was almost always on the (lowest) floor-level, the blocks having been broken up when that level was still exposed; the fragments found in the more northerly rooms were almost always either high up in the filling or else re-used in the construction of later walls, and their date had nothing to do (except as a *terminus post quem*) with that of the rooms in which they occurred.

ROOM 30. Only the south wall belonged to original building. The other walls as shown belonged to the third period, but included fragments, built into them, of walls connected with an intermediate floor-level 0·25 m. below the latest and uppermost.

ROOM 31. Brick floor of third period: against the east wall, in position, a coarse

pot (broken) containing a saucer. A projection from the south wall seems to have enclosed a hearth.

Room 32. Stone threshold: door subsequently modified. East wall late, others original: floor broken up. *Objects*: Two clay studs; fragment of pale blue glaze handle (?); fragment of red-ware pilgrim flask, and amongst many sherds pottery types 1/86 and 87, v/85, XLIII/246, LIII/64 and 65.

Room 33. This was originally separated from 34 by a brick wall. The dividing wall was destroyed and the two rooms joined up: later (second period) a new dividing wall was built exactly on the lines of the old, but separated from it by a rubbish stratum from 0·20 m. to 0·40 m. thick. At the south end of the (earliest) room were remains of a brick hearth or recess.

Room 34. The second floor-level is 1·10 m. above that of Room 35. The room had been much disturbed at a late period and was full of potsherds of all periods mixed together: none of these were necessarily as early as XVIIIth Dynasty, a great deal was XIX-XXth, and a few of the upper sherds were of Roman date.

Rooms 35-38 formed the most important part of the excavated area: they had all been more or less dug out by the Germans, and the walls which bounded or divided them had in consequence been more or less destroyed and their floors removed. The existence of a wall dividing Room 35 from Room 37 is conjectural, deduced from the presence of two doorways in their west wall opening into Room 38; its exact position cannot be fixed.

Room 35. The stone threshold of the doorway to 38 was found *in situ*: the greater part of the west wall, the north wall, and the face of the north end of the east wall had been destroyed, together with floor-level in this area. In the south end of the room the east wall stood 1·85 m. high, and was plastered with mud 0·075 m. thick retaining in one patch its yellow and white paint decoration: the west wall stood 0·70 m. high only, the top having been cut away to plant a palm-tree. There were two floor-levels, the upper of laid bricks, the lower of beaten mud: between these were the sherds of numerous amphorae, painted blue all over, of XIX-XXth Dynasty type.

Room 36. Walls mostly destroyed. South wall stood *circ.* 1·50 m. high, and preserved traces of its original plain blue-painted surface, but was breached at west end by the German work: the large limestone capital, Pl. XLII, fig. 3, was said by the villagers to have been found in or behind this breach. The irregular line of the south wall may point to the room having been divided into two by a wall north and south at this point. There may have been a door in the north wall east of the altar, but no threshold remains. Mud floor. *Objects*: Very small fragment of inscribed limestone, and fragments of *khepersh* crown in blue glaze (inlay).

Room 37. In west wall remains of a built rubble threshold. Two floor-levels as in 35.

Room 38. Narrow door in north wall. Face of west wall, whole of south wall, and whole of east wall except its spring and the two stone thresholds destroyed by German work. The existence of the south wall is proved by the fact that the altar has no stone facing at

the back, but shows its rough earth and rubble construction: brick foundations were found behind it. The return in the west wall must denote a cross-wall at this point.

*The Columns.* Bases not a pair (see above). The stone casing found by the Germans<sup>1</sup> probably late, as it hid the bases completely. Surface of columns rough, presumably to take plaster. Measurements: (1) Base, height 0·40 m., diameter 1·05 m.: lower drum, height 1·45 m., diameter 0·72 m.: upper (fallen) drum, height 1·73 m., diameter 0·62 m. (2) Base, height 0·40 m., diameter 1·05 m.: lower drum, height 1·22 m., diameter 0·73 m.: upper (fallen) drum, height 1·67 m.: in each case therefore one drum is missing, required to give equal height. For capital see Pl. XLII, fig. 3 (from Room 36): above and behind the ruins

of the west wall we found the two fragments of similar palm-frond capital shown in Fig. 26.

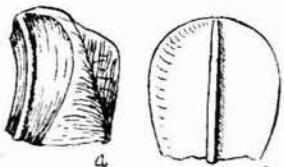


Fig. 26. Fronds from palm-leaf capitals: River-Temple, Room 38. Scale 1/10.

*Altar.* 0·60 m. high, approached by three stone steps: the front and sides are battered and faced with stone slabs cut cornice-fashion (see section, Fig. 27, 1), the top paving slightly sunk: no stonework at back. In the paving of the altar top were found the following re-used stones: (1) Block with palimpsest Ramesside cartouche, 22/413, Pl. LVIII, H.C. 157; (2) limestone relief, 22/404, Pl. XLIII, fig. 4; (3) carved block, 22/403; (4) large block with remains of cornice and of framed cartouche; (5) eight fragments of plain column-drums, diameter 0·49 m.: one of these was made out of an older building-stone and preserved traces of moulding on its cross-section. These stones were laid on a bed of moderately clean ordinary dark soil: below this was a rough heap of heavily burnt earth and of bricks burnt red halfway through and piled in disorder: mixed up with the bricks and underlying them was a quantity of black ash lying in an oval hollow 0·30 m. deep cut into the native sand.

Against the north wall of the room were found a red pot and two small saucers (at floor-level): east of the door there were in the wall plaster the impressions of two large jars which had been stood against the wall. Low down in the filling were found two fragments of limestone cornices, probably lintels from the doors to Rooms 35 and 37 (Fig. 27, 2 and 3).

The floor-level (judging from the very little that remained) had been repaired at times, but never raised.

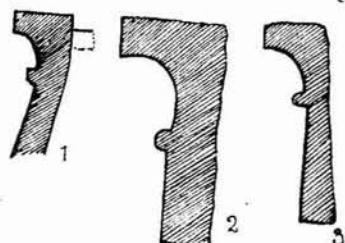


Fig. 27. Sections of cornices: River-Temple, Room 38. Scale 1/10.

<sup>1</sup> We found in the undisturbed area one stone segmentally cut corresponding to those shown in the German photograph.

## CHAPTER VII.

POTTERY.<sup>1</sup>

It will be observed that every vase drawn in the plates of pottery, Pls. XLVI to LIV has two numbers, one in Roman figures and one in Arabic. The former is a type number and the latter is the serial number given to the vase in the pottery catalogue. Each vase is shown with its left half in outline and its right half in section. The scale is one-sixth.

The classification depends on a single basis of division, that of shape, which for such a miscellaneous collection of wares as was found on this site proved by experience to be the most, if not the only, practical one. Eighty-six forms were distinguished. Every vase found was allotted to its type and a slip made out for it, giving its provenance, biscuit, slip, ornament, general appearance, and any details available as to its use.

It will be found that in the text several vases are referred to by a serial number alone without a type number. The reason of this is as follows. In 1921 the pottery found was classed according to 65 types, numbered from 1001 to 1065. When several vases of the same type were found the original type-example was distinguished by bearing its type number without addition, *e.g.* 1055, while the others were given in addition a letter, *e.g.* 1055 A, 1055 B, etc. In 1922 more numerous finds, increased experience, and greater knowledge of the use for which various forms of vase were designed necessitated a slight recasting of types as a basis for future work on the site. A new type-series was therefore worked out, bearing Roman numbers from I to LXXX. Each vase found received its type-number, to which was added for reference purposes its serial number in the general object catalogue of the season's finds. Thus xxI/212 denotes a vase of Type xxI bearing the serial number 212 in the general catalogue.

Those 1921 vases which had been drawn were next referred to the new type-system. In some cases it was natural that two vases which had in 1921 been assigned to the same type should in the new and better scheme be assigned to different types. Thus, while 1055 goes into Type xlIV, 1055 A goes to Type xlIII, and these two vases are consequently numbered xlIV/1055 and xlIII/1055 A respectively. In the case of vases not actually drawn in 1921 and already dispersed among museums this was manifestly impossible, and such vases are therefore quoted by an Arabic numeral and letter alone, *e.g.* 1002 g. The accompanying table shows which of the 1921 types were taken up into the new system, and in the case of 1921 vases not assigned to new types it may be assumed that they either belong to or are very close to the types to which other 1921 vases bearing the same serial number but a different letter have been assigned. Thus 1002 goes to Type vi, while 1002 A and L go to Type iv. Now 1002 B to K have not been assigned to the new series, but from the mere fact of their not having been drawn in 1921 it is clear that they closely

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<sup>1</sup> This chapter is entirely compiled from the Pottery Catalogue, which was the work of Mr. P. L. O. Guy.

resembled 1002 A and L, and that therefore they should either go to Type IV or Type VI, which are not very different, or be regarded as intermediate between these two types.

This is a defect inherent in the process of evolving a perfect type-series on a site which is being systematically worked over several seasons, and the finds from which must be distributed among museums year by year instead of being kept together for further study.

1921 TYPE.	1922 TYPE.	1921 TYPE.	1922 TYPE.	1921 TYPE.	1922 TYPE.
1001	XIII	1017	XXVIII	1039	XXIII
1002	VI	1018	XXIV	1040	VIII
1002 A and L	IV	1019	I	1041	XXX
1003	VII	1019 A to J	I	1042	XXXV
1003 A, B, H	VII	1019 L, M, N	I	1043	XXII
1003 C, F	V	1020	III	1044	XVII
1004	VI	1020 A	III	1044 A	XVII
1004 A	VI	1021	XI	1045	XVIII
1005	V	1022	XII	1046	XV
1006	XIV	1023	XII	1047	IV
1007	IX	1024	IV	1048	XX
1007 A	IX	1025	IX	1049	XXI
1007 B	VI	1026	V	1050	XIX
1008	IV	1027	V	1051	XVIII
1009	XLII	1028	XXXVII	1052	V
1009 A, B	XLII	1029	XXXII	1052 A	V
1010	XXIX	1029 A	XXXII	1053	IX
1010 B	XXIX	1030	XI	1055	XLIV
1011	XXXIX	1031	V	1055 A	XLIII
1011 A	XL	1032	VI	1056	XLI
1011 B	XXXIX	1033	XXXVI	1057	V
1012	XXXIV	1034	II	1058	X
1013	XXVI	1034 B, C	II	1059	X
1014	XXXVIII	1035	XLVI	1060	VI
1015	XLIII	1036	XXXIII	1061	XLIV
1015 B	XLIII	1036 A	XXXIII	1062	XXVII
1016	XXV	1037	XLV	1063	XI
1016 B	XXV	1038	VII	1065	VIII

#### DATE OF THE POTTERY.

At least nine-tenths of the pottery figured in the plates may safely be put down as belonging to the reign of Akhenaten and the decade which followed it. Neither in the main town nor in the Eastern Village nor in the tomb-chapels nor yet in Maru-Aten was any single sherd found which failed to correspond with what we already know of the pottery of this period. The River-Temple however stood on a different footing. We know that it was built later, and the excavators recognised many of the potsherds from the rubbish heap over Room 8 as definitely of XXVIth Dynasty types. It is thus evident that no piece of pottery from the River-Temple site must be classed as XVIIIth Dynasty merely on the grounds of having come from Akhetaten. Much of it certainly does belong to this period, some is undoubtedly later. The two following lists should eliminate all possibility of error.

1. List of pottery types from the River-Temple which are also represented elsewhere on the el-'Amarneh site and which may therefore occur both in the Akhenaten period and later:—I/86 and 87, IV/90, 98 and 99, V/85 and 103, VI/97, 101 and 259, VII/83, IX/110, XIX/100 and 109, XXV/88, XXXVIII/91 and 250, XLIII/105 and 246, L/106.

2. List of pottery types found only at the River-Temple and therefore not definitely datable to the Akhenaten period:— LIII/all numbers, LX/82, LXI/84, LXII/89, LXV/107, LXVI/108.

Other vases which may be later than the Akhenaten period are those which were used to contain the bones of children occasionally buried amongst the ruins, *e.g.* XVI/25 and LXXXVI/264. Such vases may be of various dates.

#### TYPE-SERIES OF POTTERY, WITH BRIEF NOTES ON SOME OF THEM.

##### I. Low ring-stands.

Generally of coarse clay, often without a slip.

##### II. Tall ring-stands.

Found mostly in the tomb-chapels, and in these cases whitewashed.

##### III. Platters for bread-baking.

Of coarse thick clay without slip. First used unfired, the firing being gradually accomplished by their use in the bread-oven.

##### IV. Bowls with round bottom and straight or incurved rim.

Generally dark red or brown biscuit with an unpolished haematite slip. Occasionally ornamented with string-marks. The blackening of the rim inside makes it clear that these bowls were often used as lamps.

##### V. Bowls with round bottom and outcurved rim.

Similar in finish and use to Type IV.

##### VI. Bowls with flat bottom and straight or incurved rim.

Similar in finish and use to Type IV.

##### VII. Bowls with flat bottom and outcurved rim.

Similar in finish and use to Type IV.

##### VIII. Bowls with flat base and tall cylindrical rim.

##### IX. Bowls with ring-base and straight or incurved rim.

##### X. Bowls with ring-base and outcurved rim.

##### XI. Bowls with ring-base and carinated rim.

##### XII. Bowls with doubly carinated sides.

1022 is a form well known in alabaster; *cf.* Pl. LIV, fig. 21A.

##### XIII. Bowls with little or no rim development and two handles at the bottom inside.

These remarkable vases are not uncommon both in the main city and in the Eastern Village. Well made, of pink biscuit, with either a red or a cream slip. The handles are stoutly made and symmetrically placed one on each side of the centre of the bottom. No clue was obtained as to the use of these bowls. None were observed to be blackened as if used for lamps.

##### XIV. Cooking bowls, round bottom and tall, slightly concave rim.

The two examples found, both from House P. 46.13, were entirely blackened by soot beneath and had been used for cooking on an open fire. Both had an ornament of string-marks.

##### XV. Deep bowls with hollow base and incurved rim.

XVI. Tall bowls with ring-base, developed shoulder and outcurving rim.

Used as cover for a large jar (LXXXVI/264) containing a child's body in House K. 51.1, and therefore possibly late.

XVII. Deep bowls with slightly pointed base and incurved rim.

XVIII. Jars with round base and roll rim.

XIX. Large jars with narrow neck, body globular or carinated.

XX. Large store-jars with wide mouth and roll rim, slightly carinated body and pointed base.

Usually found buried up to the neck in floors. Clearly used for storage.

XXI. Store-jars with narrow neck, upright rim, carinated body and pointed base.

Use similar to XX.

XXII. Large jars, similar to XX, but with narrow neck, taller shoulder and more globular body.

XXIII. Large jars with tall narrow neck, carinated body and rounded base.

XXIV. Jars with wide mouth, neck much prolonged and slightly pointed base.

XXV. Tall jars with ovoid body and very variable neck, sometimes very pronounced, sometimes indistinguishable.

These vases often have a good pink slip and a design of horizontal bands of blue lotus petals, with details in red and black.

XXVI. Tall jar with small hollow base and outcurving sides.

XXVII. Large jar with high shoulder, roll rim and pointed base.

Ornament of horizontal lines on neck and shoulder and string-marks on body.

XXVIII. Ovoid jar with plain upright neck-rim. Base slightly flattened.

XXIX. Pear-shaped crucibles with outcurved rim.

These vases, all from the Eastern Village, are of thick coarse buff clay without slip. The lower part of the outer surface is generally trimmed vertically with a knife. Several are blackened outside by fire. They probably served as crucibles for the melting of metal or some other substance. Cf. XXX, LIV and LXXIV.

XXX. Crucible with round bottom and straight sides.

XXXII. Funnels:

XXXIII. Funnel-shaped cups.

XXXIV. Inverted truncated conical pots with thickened base.

XXXV. Cylindrical pot-supports.

These are made of coarse thick clay with reinforced rim and base. Two examples are much worn inside the rim as if they had been used as supports for heavy jars. Cf. LXXXII.

XXXVI. Alabastron.

XXXVII. Globular flask with cordoned neck.

XXXVIII. Pilgrim-flask; flattened globular flask with cylindrical neck and two handles on shoulder.

This vase is made sometimes of fine clay with a polished buff slip, sometimes of much rougher material. Vases of the former make are doubtless imported, the latter being Egyptian imitations.

XXXIX. Tall jugs, narrow mouth, one handle and moulded base.

XL. Tall jugs with narrow neck, one handle and pointed base.  
 258 is of fine pale olive clay trimmed vertically. The handle is thrust through the walls of the vase. Probably an import.

XLI. Oenochoe. Tall jug with ovoid body, very long neck, large handle and well-made flat rim.

XLII. Wide-mouthed jug with tall neck, marked shoulder and flat base.  
 Generally of fine ware. A well-known type persisting into the XIXth Dynasty, frequently in alabaster.

XLIII. Amphorae. Very large jars with round or slightly pointed bottom, narrow neck and two handles at sides.  
 Clearly storage jars; well made and sometimes decorated in blue.

XLIV. Hydria. Jar with carinated body, cylindrical neck and two handles.

XLV. Large coarse cup with trumpet foot.

XLVI. Skyphos-shaped cooking-pot with lid and two handles.  
 Bottom much blackened by fire.

XLVII. Globular jug with short neck and one handle.

XLVIII. Ovoid jar with rounded base and short neck.

XLIX. Krater with high outcurved neck, ovoid body, ring-base and two vertical handles.

L. Bowls with rounded base and carinated rim.

LI. Jars with slight ring-base, carinated body, wide mouth and roll rim.

LII. Inverted conical cups.

LIII. Bowls with pointed base, straight or incurved rim.

LIV. Curved crucible with one leg.

LV. Wide-mouthed jar with cylindrical neck and flat or slightly pointed base.

LVI. Carinated globular jar with slight ring-base and roll rim.

LVII. Globular jar with carinated body, slightly pointed base, narrow outcurved neck.

LVIII. Amphora widening towards the bottom; two handles.

LIX. Small amphora with large neck and handles.

LX. Large amphora with small flat base.

LXI. Flat open plate.

LXII. Pear-shaped flask with ridged neck.

LXIII. Large amphora with slightly pointed bottom, tall cylindrical neck, roll rim and two handles.

LXIV. Large carinated bowl.

LXV. Small jar with sloping sides, outturned neck and two handles.

LXVI. Pear-shaped flask with long curved neck.

LXVII. Large tall store-jar with carinated body and moulded rim.

LXVIII. Carinated bowl, similar to LXIV.

LXIX. Small bowl set on high foot. Blue petal design with details in red and black

LXX. Pear-shaped amphora with four handles and tall cylindrical neck.  
 For coloured decoration see below, p. 140.

LXXI. Hemispherical cup on high foot.

LXXII. Small amphora with two handles and wide mouth.

LXXIII. Tall, rough jug with flat base and outturned mouth.

## LXXIV. Three-legged crucible.

Two sections are shown. *Cf.* LIV.

## LXXV. Carinated bowl, similar to LXIV and LXVIII.

## LXXVI. Globular amphora with slightly pointed base, high narrow neck, and two vertical handles.

## LXXVII. Jug with ring-base, tall neck and high handle.

Dark grey clay with pattern of white lines. Foreign make.

## LXXVIII. Tall jar with round base, carinated body, tall cylindrical neck and moulded rim.

## LXXIX. Hemispherical bowl on high trumpet-foot.

## LXXX. Jar with pointed base, carinated body and concave neck.

## LXXXI. Bowl-shaped lid with handle.

## LXXXII. Open vase with ridges.

See below, p. 141. Probably a pot-stand. *Cf.* XXXV.

## LXXXIII. Plain bowl with pinched-in rim.

The rim is pinched in on one side to form a lamp. Much blackened at the spout.

## LXXXIV. Double beakers.

Two pots of Type XLII joined together at their widest part.

## LXXXV. Bowl with flat base and concavo-convex sides.

## LXXXVI. Tall amphora with rounded base, distinct shoulder, two handles.

Contained body of infant and was covered by XVI/25; hence may be late.

## PAINTED WARE.

Very frequent among the pottery of the site were fragments of the gaily painted ware which forms a feature of the middle and late XVIIIth Dynasty, and which here seems to have reached its highest development. Plates XLIV and XLV show the finest specimens, reproduced from Mr. Newton's copies in colour. The vases are in a rough pinkish or reddish buff material and bear no specially prepared or smoothed surface for painting. The designs are mainly in a rather light blue with the addition of details in red-brown and black, and in one case, Pl. XLIV, fig. 4, in yellow.

Pl. XLIV, fig. 1 is a four-handled pithos or store-jar (Type LXX/130) with a rich red-buff surface and designs in two colours, black and brown. The division of the horizontal band on the shoulder into panels alternately filled with decoration and left blank is worthy of notice.

Pl. XLIV, fig. 2 is of more ordinary type. The decoration is all laid out in horizontal bands. The design is in blue, and the small details in red-brown.

Pl. XLIV, fig. 3 is similar, but even simpler, though here the details are in two colours, red and black, overlaying the main design, which is in blue.

Pl. XLIV, fig. 4 is an unusual type of vase, the body of which is in openwork. Here, as usual, the main colour in the decoration is blue, with details added in purple-brown and also in light yellow, this last an unusual colour.

Pl. XLV, fig. 1 is an unrolled design from the shoulder of a large vase of which a few

fragments only were found in N. 49.11. The design, which is in blue with red and black details, is carried out with a roughness proportionate to the size and coarseness of the vase.

Pl. XLV, fig. 2. An unrolled design from a large pot of which a few fragments were found. Design in blue with black and red details. The design is the festoon of flowers, leaves and petals so frequent in the frieze of the Central Halls and loggias of the houses.

Pl. XLV, fig. 3. A fragment with design in blue and detail in red-brown and black.

Pl. XLV, fig. 4. Upper part of a large store-jar. Design of lotus and papyrus with figures of Bes in blue and details in red-brown and chocolate. Judging from the fragments and proportions there were three figures of the god alternating with three groups of papyrus.

Pl. XLV, fig. 5. Fragment of a large open bowl (?) : the section of the fragment is shown on the left. Design in blue, papyrus and lotus ; details in red-brown and black.

Pl. XII, fig. 1. These two vases, LVI/69 and 70, from the Eastern Village, have a pinkish buff biscuit and a greenish cream slip. The decoration is in brown. The lily motive in 70 may possibly be derived from Mycenaean prototypes.

CHAPTER VIII.  
INSCRIPTIONS OF 1922.

BY BATTISCOMBE GUNN.

In view of the importance of any inscriptional material dating from the Aten period every possible care was given in both seasons to the collection of all fragments, however small, and to their proper examination and copying in view of adequate publication. The material here given is of the most varied character. It includes hieroglyphic inscriptions from architectural fragments, grave stelae and jar-sealings, and hieratic inscriptions from wine jars. The main town-mounds yielded very little except inscribed door-jambs and ostraca, and the Eastern Village furnished even less, as might have been expected from its poor character. Maru-Aten on the contrary was most prolific in inscribed architectural fragments, mud sealings and ostraca.

Some of the finer inscriptions have already been dealt with in the preceding chapters. The rest are for convenience treated together here, grouped according to the various parts of the site in which they were found.

On Plates LVI to LX will be found the hand copies, most carefully made and based on dry squeezes. Each bears a number at the right-hand top corner, and by this number preceded by the letters H.C. each is referred to in the text. The number at the left-hand bottom corner of each is its reference number in the General Object Catalogue of the 1922 expedition, and is not used in this chapter. It is most important to notice that in these copies the hatching indicates a surface intentionally erased in Egyptian times, while the hatching shows, as usual, mere accidental damage.

CONCORDANCE OF HAND COPIES AND PLATES.

<i>Hand Copies.</i>	<i>Plates.</i>	<i>Hand Copies.</i>	<i>Plates.</i>	<i>Hand Copies.</i>	<i>Plates.</i>
1-9 ..	LIX	80-91 ..	.. LVII	128 ..	.. LVIII
10-11 ..	LVII	92 ..	.. LX	129-34 ..	.. LX
12-22 ..	LIX	93 ..	.. LVII	135-8 ..	.. LVIII
23-5 ..	LVII	94 ..	.. LX	139-40 ..	.. LX
26-52 ..	LIX	95 ..	.. LVII	141 ..	.. LVIII
53-61 ..	LVII	96-104 ..	.. LX	142 ..	.. LX
62-3 ..	LIX	105-7 ..	.. LVII	143 ..	.. LVIII
64-6 ..	LVII	108 ..	.. LX	144 ..	.. LX
67-9 ..	LIX	109-113 ..	.. LVII	145 ..	.. LVIII
70 ..	LVII	114-19 ..	.. LVIII	146-7 ..	.. LX
71-2 ..	LIX	120-4 ..	.. LX	148-9 ..	.. LVIII
73-9 ..	LX	125 ..	.. LVIII	157 ..	.. LVIII
		126-7 ..	.. LX		

The inscriptions given on Plate LXI and numbered at the top right-hand corner with a number followed by an asterisk are less careful copies of some of the more insignificant inscriptions from Maru-Aten II. They are referred to in the text as R.C. (Rough Copy). The numbers given at the left-hand bottom corner of each again refer to the Object Catalogue. N.N. indicates that no number was given to the fragment.

The following notes give the provenance of the fragments and the material of which they are formed.

#### HAND COPIES (H.C. Pls. LVI-LX).

Nos. 1-120 are from Maru-Aten II, the materials being:—

1-11, Mottled pink granite,	71-2, Black granite,
12-46, Red granite,	73-9, Fine Moḳaṭṭam limestone,
47-52, Gesso duro or mortar,	80-109, Limestone, 89-91 and 102-3 being of a denser variety than the rest.
53-69, Alabaster,	
70, Hard reddish sandstone,	110-120, Sandstone.

Nos. 121-28 are from Maru-Aten V:—

- 121, Dark grey granite,
- 122-5, 127-8, Limestone,
- 126, Sandstone.

Nos. 129-46 are from Maru-Aten VIII:—

- 129-44, Limestone,
- 145, Sandstone,
- 146, Gesso duro or mortar.

No. 147, surface, 100 yards north of Maru-Aten: Dark grey granite.

Note further:

Nos. 1, 2, 12, 14, 18, 21, 23, 24, 25, 30, 32, 34, 45, have a pronounced horizontal curve.

No. 123 has a slight horizontal curve.

Nos. 19 and 22 are cut for filling in with paste.

No. 31 is incised and filled in with white paste.

Nos. 73, 74 and 76 are fragments of bowls, inscribed on the flat upper surface of their rims.

No. 75 is a piece of inlay.

#### ROUGH COPIES (R.C., Pl. LXI).

All were found in Maru-Aten II. The materials are:—

1*, Mottled pink granite,	36* and 37*, Moḳaṭṭam limestone,
2*-25*, Red granite,	38*-44*, Fine black granite inlay, <sup>1</sup>
26*-35*, Grey granite,	45* and 46*, Alabaster.

#### FROM THE MAIN CITY SITE.

Of the inscriptions from this part of our work the most important are those from the great mansion of the Vizier Nekht (House K. 50.1). They are as follows:

A. Inscriptions on mud plaster from the north and south niches of the West Loggia. These vertical columns of writing, flanking the niches, were painted in yellow on a red

<sup>1</sup> Remains of yellow paste filling.

ground, and were not only greatly damaged but extremely faint, the yellow paint having very much flaked away even in the signs that remained. They gave us, however, our first news that we had to do with Nekht the Vizier, and the copies, Fig. 28, are quite independent of the stones dealt with below. The following is a translation of the restored

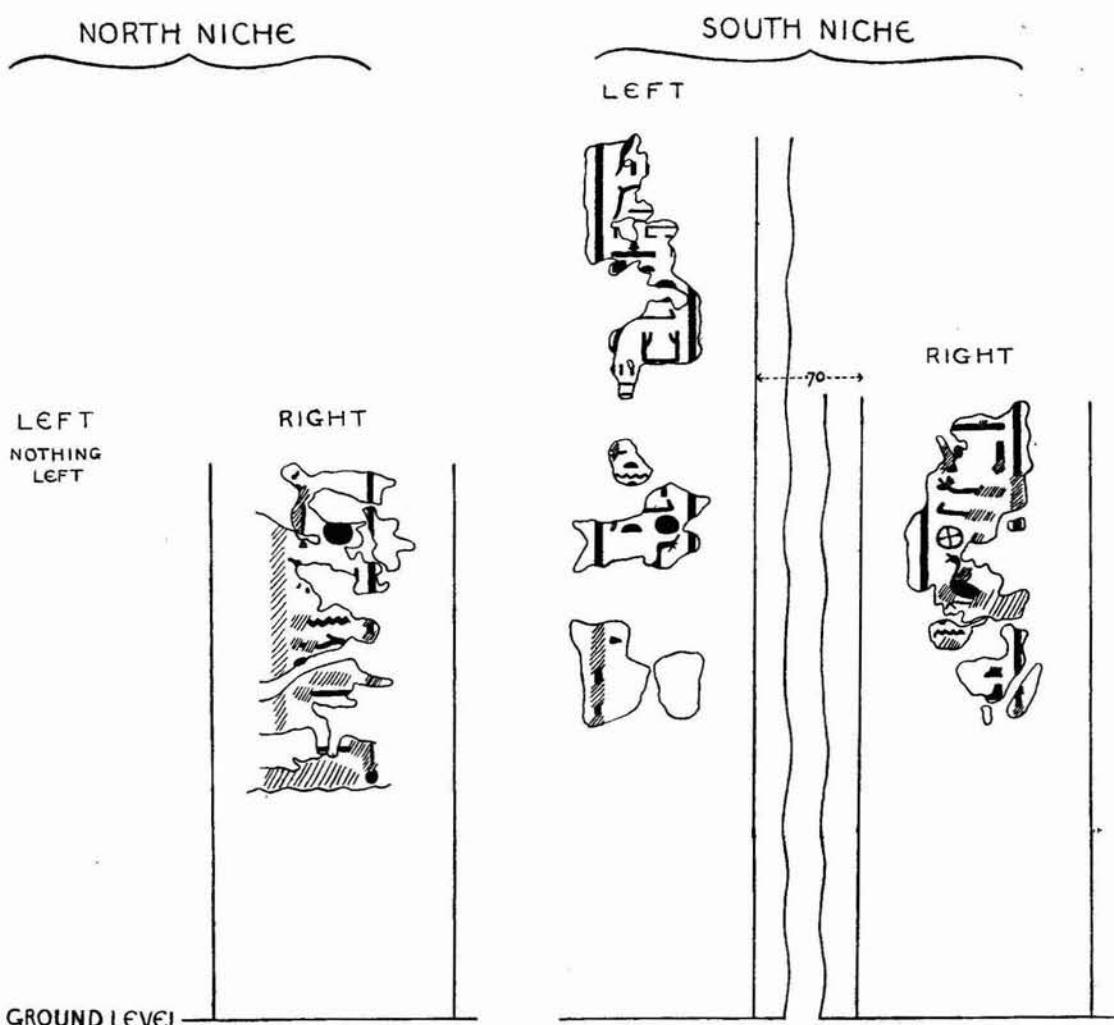


Fig. 28. Niche-inscription of Nekht: House K.50.1.

readings given in Fig. 29:—South Niche, left: “ . . . . numerous (?) <sup>1</sup> . . . . , Overseer of . . . . in the House Sehtepirē<sup>2</sup>, Overseer of works in Akhetaten, Overseer of the City, the Vizier, the justified Nekht.” South Niche, right: “ . . . . , who is not negligent about what is enjoined upon him,<sup>3</sup> the Overseer of the City, the Vizier, the justified Nekht.” North Niche, right: “ . . . . Aten, the Vizier, the justified Nekht.” The title

<sup>1</sup> seems alone to suit the traces.

<sup>2</sup> Of *Pr šhtp(i)-Rē*, “the house ‘Rē’ is propitiated,” we know nothing but the name, which occurs elsewhere, see DAVIES, V, 5 note, and p. 162 below (jar-sealings types Q, T, OO); it is evidently to be distinguished from *Pr-šhtp-Itn*, for which see DAVIES, IV, 4, 5, and pp. 162, 166, below (jar-sealing P, jar-graffiti 14-19).

<sup>3</sup> On this cf. p. 159, note 3 below.

"Overseer of Works" is frequently borne by Viziers; cf., for the New Kingdom, WEIL, *Vizer des Pharaonenreiches*, 124-5.

B. A large block (22/585), a smaller one, and 202<sup>1</sup> fragments (22/584), all from inscribed limestone door-jambs. These stones present four different sizes (A, B, C, D) of vertical inscriptions and one size (E) of horizontal inscription;<sup>2</sup> further, in each of groups A to D some pieces have the signs facing one way and some the other; thus we presumably have to do with at least four pairs of door-jambs, as well as one lintel. The door-jambs with the largest writing (A) stood at the front door; the other pairs evidently flanked the large doors in the middle of the north and south walls of the central hall and one or more other doors. The large block is given in Pl. VII, fig. 4, the smaller one and a selection of the other fragments in Pl. VII, fig. 6, and Pl. XXXV, fig. 10.

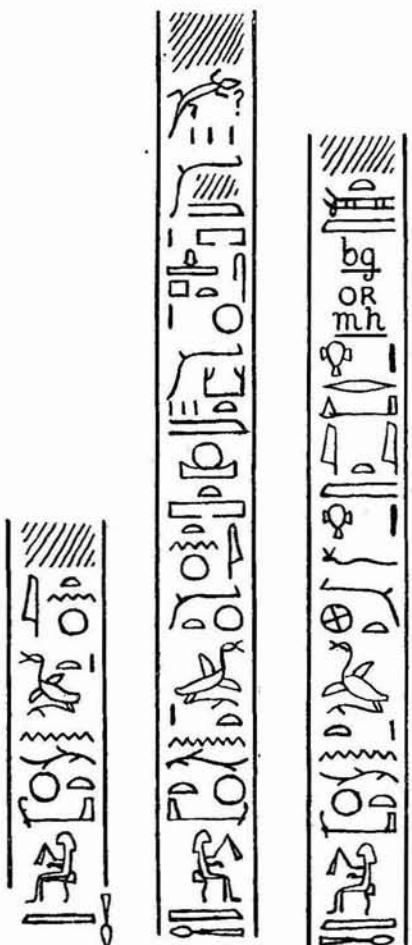
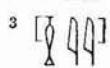


Fig. 29. Restoration of inscriptions of Fig. 28.

Lord loves because of his character (*inm*)," "whom his Lord . . . . because of . . . .," "the overseer of works in . . . .," "overseer of . . . . [in ?] the house of . . . .," "Nekht,"

<sup>1</sup> Twenty-four of these were fragments of reliefs (with red, black and green paint) of the royal family offering, with the King's titles.

<sup>2</sup> Size A, 0'097-0'105 m. between lines, signs about 0'083 wide, blue; B, 0'085 m. between lines, signs about 0'065 m. wide, red and blue; C, 0'052-0'056 m. between lines, signs about 0'045 m. wide, hardly any colour left; D, 0'046-0'05 m. between lines, signs about 0'035 m. wide, blue, perhaps pink ground; E, signs about 0'04 m. wide, no colour. Lines blue in A to D.



words from a prayer or address ("thou hast . . .," "do thou give to . . ."), and contained the Queen's name; the god Shu and "entering" also occur. The horizontal inscription contained the "offering that the King gives" formula, and mentions the "overseer of works."

The (for this reign) extravagant allusions to the King as "forming all men" and as "the god who makes men" are noteworthy. The reference to "writings upon stone" among the epithets and titles is obscure; was Nekht stated to have composed praises of the Aten or the King, or to have promulgated laws, in "writings upon stone"?

We now know of three Viziers of Akhenaten's reign: Ra'mose,<sup>1</sup> clearly the first, Nekht(?)paaten, and Nekht. The second of these, whose name, though written  both times that it occurs, is perhaps to be taken as *Nḥt-p-Itn*, is known to us only from fragments of inscription in a very poor, small, unfinished tomb at el-'Amarneh (see DAVIES, V, 12-13). The paltry character of this tomb (in signal contrast to Nekht's splendid mansion) perhaps dates it to the decline or fall of Akhetaten, and we may provisionally place the known Viziers of the period in the order: Ra'mose, Nekht, Nekht(?)paaten.<sup>2</sup>

The only other inscribed monument from the main city site is:

No. 22/575. Pl. XXXIII, fig. 6. Lower ends of four lines; left of these the lower part of a man kneeling in adoration. "(1) . . . Jubilees (2) . . . [thy ?] Son<sup>3</sup> (3) . . . all that thou hast made (4) . . . like Aten." These lines were probably quite short, as the man's arms will have stretched out above them.

The two following inscribed fragments were bought, the first in el-Hāg Kandil, and the second in et-Til.

No. 22/604. Pl. XXXV, fig. 7. ". . . brilliant<sup>4</sup> in glory, rejoicing in Truth . . ." From a door-jamb? Note the reinterpretation of the cliché *hri* rejoicing *hr* because of *m³t* truth, into *hri-hr* rejoicing *m* in *m³t* truth.<sup>5</sup>

No. 22/607. Pl. XXXV, fig. 6. ". . . sees his heart, the beloved one, by seeing [whose beauty?] one lives . . ."<sup>6</sup> Perhaps refers to the Queen, as seeing the King's heart; or is  a writing of *mryti*?

#### FROM THE VILLAGE SITE.

From the kitchen of Main Street No. 10 came forty-one fragments (some very minute) of mud brick, having a centimetre-thick coating of mud plaster on which were painted, on a yellow ground, vertical lines of black inscription with red dividing lines, and perhaps also

<sup>1</sup> For whom cf. WEIL, *op. cit.*, 86-7.

<sup>2</sup> That Nekht(?)paaten and Nekht were identical is extremely improbable. No Nekht seems to be mentioned in the tombs, unless the "scribe of the House of Pleasure" (DAVIES, III, Pl. XIV) bore this name (the reading *Nḥt-iw* . . . see DAVIES, III, 14, seems unlikely, both from the abnormality of such a name and from the appearance of the traces after *nḥt*, which I collated but could not read).

<sup>3</sup> The determinative shows that the King, as the son of Aten, is referred to.

<sup>4</sup> *Thn.*

<sup>5</sup> For *m³ > m m³* cf. *m³-hrw* "justified" > late *m m³-hrw*.

<sup>6</sup> *Ptr i p:(y)-f ib, mrt(?) nti 'nḥy-tw m ptri [nfrw-s?]*.

representations. The largest fragment gives: right, a red disk (?), not a hieroglyph; and left, the tops of two lines of inscription: thus mentioning "herdsman" or "to herd."<sup>1</sup> Other fragments give and also the Sēth-animal. The text thus contained the *htp rdi ni·swt* formula (rare at this period) and an invocation. Fairly rough work.

## FROM MARU-ATEN.

A.—THE FORMAL INSCRIPTIONS.<sup>2</sup>

These are almost without exception fragmentary, and are further quite stereotyped in character, containing hardly anything but the titles, names and laudatory epithets of the Aten, the King, the Queen and the eldest princess Meritaten. It is to be noted that there is no evidence of their having been deliberately effaced from the stones by the later reactionaries; such erasures and alterations as occur have clearly been made during the lifetime of the king, and without animus against himself or his religion. The workmanship is very variable in quality.

The following translations of a few of the better-preserved inscriptions cover the whole of the pieces reproduced on Pls. LVI to LXI, with the exception of a few which will be found noted below.

No. 22/273. Fragments of red granite stela, Pl. LVI, and Pl. XXXIV, figs. 1 and 2. Obverse: (a) From large cartouches in centre, to right-hand side: "May Rē<sup>c</sup> live, Ruler of the Horizon, rejoicing on the Horizon in his name 'Rē<sup>c</sup> the Father, who has returned as Aten,'<sup>3</sup> given life for ever and ever. The living, the great Aten, Lord of Jubilee(s), Lord of all that Aten surrounds,<sup>4</sup> Lord of Heaven, Lord of Earth, in the Shade-of-Rē<sup>c</sup> of the King's-daughter Meritaten<sup>5</sup> in the Maru of the Aten in Akhetaten."<sup>6</sup> (b) From smaller cartouches leftwards: "Lord of the Two Lands, Neferkheprurē-Wānerē<sup>c</sup><sup>7</sup>; Lord of Glory, Akhenaten,<sup>8</sup> given life, the long-lived.<sup>9</sup> The Good God, Wānerē<sup>c</sup>,<sup>10</sup> the King of Upper and Lower Egypt, Living

<sup>1</sup> The word will here be used figuratively, perhaps of the Aten's relation to mankind.

<sup>2</sup> All these seem to come from architectural features, with the exception of Hand Copies 73, 74, 76, from a stone bowl or bowls.

<sup>3</sup> This is the later form of the "didactic" name of the Aten; for the translation cf. my forthcoming article in *J.E.A.*

<sup>4</sup> for .

<sup>5</sup> "Beloved of Aten."

<sup>6</sup> The erasures and alterations here are discussed p. 153 below. On the "Shade-of-Rē<sup>c</sup>" see below, p. 155 with note 2; on the Maru of the Aten, see p. 156.

<sup>7</sup> The King's "throne-name," retained throughout his reign, and meaning "Rē<sup>c</sup>'s mode-of-being is good: Rē<sup>c</sup> is one." This throne-name marks a break with tradition in containing two statements as to the nature of Rē<sup>c</sup>, instead of (as always previously) one, and in this respect is significant as showing the king's preoccupation with the Sun-god even at his accession; the monotheistic tendency of the second statement is even more significant.

<sup>8</sup> The later, Atenist, personal name of the King, meaning "It is well with Aten"; obviously an allusion to the return of the Sun-god to undivided power.

<sup>9</sup> here, as often at Tell el-'Amarneh, for

<sup>10</sup> A common abbreviation of the King's name, written without cartouche.

in Truth, Lord of the Two Lands, Neferkheprurē-Wa'nerē, given life. The King's-daughter Meritaten . . . . Neferkheprurē-Wa'nerē . . ." Reverse: As obverse, except that the King's two cartouches, to the left of those of the Aten, are headed "King of Upper and Lower Egypt," and "Son of Rē."

Pl. XXXII, fig. 1, top, right, and Hand Copies (hereinafter H.C.) 123, 108, 141, 122; the earlier form of the Aten's name, in two cartouches: "May Rē live, Horus-of-the-Horizon, rejoicing on the Horizon in his name 'Shu who is Aten.'"

H.C. 10, 73, 138 (cf. also H.C. 32, 77, 90, 27): "May the Father live," followed by Aten's name in cartouches.

H.C. 76: "The King of Upper and Lower Egypt, Living in Truth, Lord of the Two Lands, Neferkheprurē-Wa'nerē; Son of Rē, Living in Truth, Lord of Glory, Akhenaten."

Pl. XXXII, fig. 1, and Pl. XXXIV, fig. 5: "The Great King's-wife, Nefernefruaten-Nefretiti."<sup>1</sup>

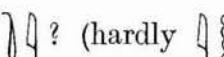
Pl. XXXIV, fig. 4, and Pl. XXXV, fig. 8: The King's-daughter, of his body, his beloved, Meritaten, born [of the great king's-wife, etc.]"

Except for the variants and alterations discussed below, the following<sup>2</sup> are the only fragments which are not covered by the above translations:

H.C. 21, 4: *Nišwt-bitl* and *s: Rē* titles of the King preceded by *'nl*, "may . . . . live," or, "the Living One."

H.C. 143, 144, the word  "teach."<sup>3</sup> The word is not uncommon at Tell el-Amarneh in connection with the King "teaching" Atenism to his subjects, but it is difficult to say what the context may have been in these cases.

H.C. 115:  containing "her great . . . . of Rē"? or "whom Rē has magnified."<sup>4</sup>?

H.C. 114: the signs .

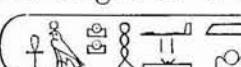
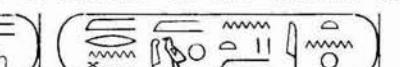
H.C. 92: remains of , ?

#### *The Variants and Alterations.*

These are of considerable importance, and therefore need discussion in some detail. They concern principally the names of the Aten, and those of the Queen and Princess Meritaten.

##### 1. The Names of the Aten.

The Maru-Aten site offers us three stages in the evolution of the names of the Aten:

(a) occurrences of the earlier form   "May Rē"

<sup>1</sup> "The goodness of Aten is good: a good thing is come." This, the later form of the Queen's name, resembles the King's throne-name in containing two statements; the first is, like those of the King's throne-name, a statement as to the nature of the Aten.

<sup>2</sup> All these are from Maru-Aten II, with the exception of H.C. 143, 144.

<sup>3</sup> The word might be  "door" in H.C. 143, but that is excluded in H.C. 144, and it is unlikely that we have here two different words.

<sup>4</sup> Cf. this epithet as an addition to Tuthmosis III's throne-name (SETHE, *Urkunden*, IV, 601/4).

live, Horus-of-the-Horizon, rejoicing on the Horizon in his name 'Shu who is Aten';"

(b) occurrences of the later form "May Re' live, Ruler of the Horizon, rejoicing on the Horizon in his name 'Re' the Father, who has returned as Aten';" (c) cases in which the earlier form has been altered to the later by overworking of the stone.

(a) The earlier form, unaltered, occurs only rarely on this site. I count but eleven certain occurrences in all: see Pl. XXXII, fig. 1, top right and centre left,<sup>1</sup> H.C. 123, 108, 141,<sup>1</sup> 96<sup>1</sup> and 122, in addition to four unpublished fragments. Of these, two come from M. II,<sup>2</sup> two from M. V, and seven from M. VIII.

(b) In ten cases the earlier form was found altered to the later; see Pl. XXXIV, fig. 6, and Pl. XXXV, fig. 9 (one fragment is not published). In the larger, deeply-cut cartouches, the signs to be effaced were filled in with cement and the new signs cut over them into the cement and stone; in the smaller (*cf.* Pl. XXXV, fig. 9), the offending signs were cut away and the new ones lightly and roughly cut over the new surface. Where the cement has fallen away a curious composite of old and new is seen. In horizontal cartouches the group normally written is overcut as and (see Pl. XXXIV, fig. 6).

All these alterations come from M. VIII.

(c) The later form, not altered from the earlier, occurs at least fifty-four times,<sup>3</sup> namely, forty-eight times in M. II, once in M. V, three times in M. VIII, and twice on pieces that cannot be assigned to any special part of Maru-Aten. The writing of the name calls for no comment except in respect of the group in the second cartouche normally written , which occurs in the forms H.C. 101, 82, H.C. 2, ? H.C. 116, and apparently originally R.C. 18—all in vertical cartouches.

To these data must be added the occurrences of the Aten's *hb-sd* titles, namely, *im i hb-sd*, "he who is in Jubilee," and *nb hb(w)-sd*, "Lord of Jubilees," which regularly accompany the earlier and later forms of the name respectively, and may therefore rank, when broken away from the names, as so many occurrences of the two forms. *Im i hb-sd* occurs seven times: H.C. 135, 136, 137, 140,<sup>5</sup> Pl. XXXIV, figs. 3 (twice) and 6; in every case but the last (associated with earlier name altered to later) broken away from the name, and all coming from M. VIII. *Nb hb(w)-sd* occurs on five stones, twice broken away—H.C. 33,<sup>5</sup> R.C. 16, and three times associated with the later name—H.C. 15, 80, and 22/273 (Pl. XXXIV, figs. 1 and 2); in every case from M. II.

The following is a tabulation of these figures. "Intermediate" refers to the altered

<sup>1</sup> Shown to belong to the earlier form by the presence of the determinative to *i*; see my article, *loc. cit.*

<sup>2</sup> "M. II" etc. = "Maru-Aten II," etc., here and below.

<sup>3</sup> The criterion afforded by the writing of *i* has been taken into account in this total.

<sup>4</sup> This sign is reversed in the original.

<sup>5</sup> Traces.

names, the number of which is included in brackets also among the earlier and later forms. The numbers added in Roman figures are those of the broken-away *hb-sd* titles, earlier and later.

Form of Name.	M. II.	M. V.	M. VIII.
Earlier	2	2	7 + vi (+10)
Intermediate			10
Later	48+ii	1	3 (+10)

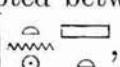
Thus in M. II 96 per cent. of the names are of the later form, which makes it pretty clear that at all events the bulk of the building was constructed after the change in the name was officially promulgated; and as there are no cases of overworking, and as, further, the two occurrences of the earlier form here are on fairly small pieces of limestone, which may perhaps have found their way hither from another part of the site while the work of destruction was in progress, it is by no means impossible that the whole of this part of Maru-Aten was posterior to the change.

The evidence with regard to M. V is too scanty to admit of any certain conclusions; taken at its face value, it points to this part having been begun before the change in the name, and continued subsequently thereto.

With regard to M. VIII, we have clear evidence that it was commenced before the name was changed; and that it was continued or added to afterwards is shown by the three cases of the later name not changed from the earlier. Of the seven occurrences of the earlier name not seen to have been altered, two (H.C. 141, Pl. XXXII, fig. 1, centre left) may have been altered, but not enough of the cartouche remains to decide this, since the criterion which stamps them as belonging to the earlier form (— determinative of *hb*) is a detail which was not modified in the overworked name; this probably applies also to the *imi hb-sd* title. Why all the earlier names were not altered here is as obscure as in the cases of M. II and M. V.

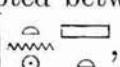
Now the change in the Aten's name was made in about the ninth year of Akhenaten's reign.<sup>1</sup> It may thus be inferred that M. VIII was begun, or built, before that date, and continued, or added to, after it; and that M. II was built mostly, if not entirely, after that time.

## 2. The Names of the Queen and Princess Meritaten.

The Queen's name occurs in Maru-Aten only in the later, fuller form, thus— which she seems to have adopted between the sixth and eighth years.<sup>2</sup> Meritaten's name occurs only in the writing , with or without .



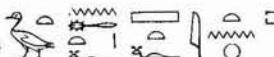
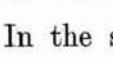
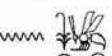
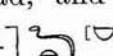
<sup>1</sup> Cf. my article, *loc. cit.*

<sup>2</sup> The  is reversed in the original.

<sup>3</sup> My collation of Boundary Stela K, which bears Text A, convinced me that the later form of the Queen's name does not occur there (against DAVIES, V, pp. 28, 29, 30 note A, and Pl. 29, line ix); on the other hand it occurs regularly in Text B, the latest date contained in which is 8/5/8.

## MARU-ATEN VIII.

Parts of the Queen's name and title  "Great Wife of the King," with the addition  "living for ever and ever," were found undefaced twenty-one times<sup>1</sup> on blocks or parts of blocks and fragments of the mortar which joined these (for examples see Pl. XXXIV, fig. 5, and Pl. XXXII, fig. 1). But on the column-drums (Pl. XXXIV, fig. 4, and Pl. XXXV, fig. 11) her inscriptions seem to have been partly effaced.

Meritaten's titles and name  "the King's-daughter of his body, his beloved, Meritaten," occur six times not surcharged (Pl. XXXV, fig. 8; H.C. 129–133); and the good style of the cutting makes it unlikely that they are later additions on blank surfaces, although there may have been erasures at the side on H.C. 129. On a column-drum (Pl. XXXV, fig. 8), they were followed by the affiliation  etc., and a fragment of the affiliation is also preserved in H.C. 134; although this formula is constant elsewhere, these two are the only instances of it from Maru-Aten, and certainly belong to the original inscriptions of M. VIII. It is not now possible to say whether any other of these occurrences of the name were followed by the affiliation formula—to which some of the instances of the Queen's name, mentioned above, may belong. In the seventh occurrence (Pl. XXV, fig. 9, from a red granite stela) we have  surcharged over wording which preceded  quite similarly to the alterations of class (a) discussed below under "Maru-Aten II," and thus reading "the beloved King's-daughter of the King etc."; on the right of this,  are surcharged on an erased surface, below which are the back of the (original) Queen's head, and the sistrum held by Meritaten (obliterated?), and on which, behind the head,  is still faintly visible. Parts of the King's titles, surcharged, also occurred on two unpublished limestone fragments.

The plastic alterations must be taken into account here. On one column-drum (Pl. XXXIV, fig. 4), on which the Queen's inscription has been partly effaced, her characteristic plumes have been obliterated with cement, to transform her into the daughter;<sup>2</sup> the original figure of the latter (now lost), under her inscription, was probably wholly obliterated. On another the head of the Queen was altered by cutting and patching with cement to do duty for that of the daughter; on the right (Pl. XXXV, fig. 8) the original head of Meritaten has been cut out; and on the left (Pl. XXXV, fig. 11) her figure was perhaps covered over with cement.

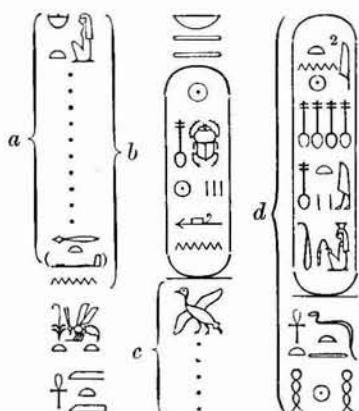
<sup>1</sup> Including small unpublished fragments.

<sup>2</sup> The King's head and crown have been enlarged here, as with the crown of the left-hand figure on the stone published by Griffith, *J.E.A.*, V, Pl. 8, where also the King's garment has been shortened in both figures, while the titulary of the Aten in that document (left) seems by its hasty style to be a later addition. Alterations appear to be common on Akhenaten's monuments.

## MARU-ATEN II.

Erasures<sup>1</sup> and overworkings fall into the following classes:—

1. In a number of cases seems to have originally stood a legend:



"The great . . . . . wife of the King of Upper and Lower Egypt, Living in Truth, Lord of the Two Lands, Neferkheprurē-Wa'nerē, the . . . . .,—Nefernefruaten-Nefretiti, living for ever and ever."

See Pl. LVI, 273, obv., rev., 271, frags. J, M, H.C. 40, 41, 42, 44, 55 + 59, 60, 64, 85, 126, R.C. 6, 38, 44; also H.C. 45, 53, 74, 117, R.C. 30, 41 may be included here, although it is not quite certain that they belong to the same scheme. In this legend the following changes were made:

(a) Part *a* was effaced and replaced by "King's-daughter," Pl. LVI, 271, frag. J, H.C. 42, R.C. 44 (twice), "beloved King's-daughter," H.C. 85,<sup>3</sup> "eldest King's-daughter," Pl. LVI, 271, frag. M, "the King's-daughter Meritaten," H.C. 41.

(b) Part *a* was replaced by , making with the following "the Good God Wa'nerē," Pl. LVI, 273, obv.,<sup>4</sup> rev., H.C. 64.

(c) Part *b* was replaced by , "the Good God, beloved of the Aten," H.C. 44, 55 + 59, 60, R.C. 6.

(d) Part *c* was replaced by "given life (for ever (and ever)," Pl. LVI, 273, obv., rev., 271, frag. J; H.C. 45, 53, 74, 117, 126; R.C. 30, 38, 41.

(e) Part *d* was replaced by (Pl. LVI, 273, obv.), (Pl. LVI, 271, frag. J, "the King's-daughter of his body, his beloved, Meritaten," H.C. 40, 55 + 59; cf. also H.C. 126, 60.

Thus the original inscription was altered to the following (in its fullest form):—

"The {beloved} King's-daughter of {eldest} the King of Upper and Lower Egypt, Living in  
"The Good God {Wa'nerē} {Beloved of Aten}

Truth, Lord of the Two Lands, Neferkheprurē-Wa'nerē, given life for ever and ever; the King's-daughter, of his body, his beloved, Meritaten."

<sup>1</sup> Indicated in the Hand Copies by oblique hatching, sloping downwards to the right (*i.e.* in the opposite direction to the hatching which indicates an accidentally damaged surface).

<sup>2</sup> The is reversed in the original.

<sup>3</sup> Here the also was erased and cut again.

<sup>4</sup> Possibly "Good Ruler" here; cf. p. 154, note 2, below.

Of the original inscription, in part *a* is more or less visible in Pl. LVI, 273, obv., rev., 271, frag. J, H.C. 44, 55+59, 64 and perhaps 85. at the end of this part is clear only in H.C. 55+59, but the traces suit or in Pl. LVI, 273, obv., rev., H.C. 42. What came between the two groups I am unable to say; H.C. 55+59 may have read .... It is quite doubtful whether the same words occurred in all cases. Part *c* seems to have begun with in Pl. LVI, 273, rev., 271, frag. J, H.C. 45; cf. also an uneffaced under the cartouche in H.C. 40, R.C. 11. I cannot read the traces of further signs visible in Pl. LVI, 273, rev., 271, frag. J, H.C. 45.<sup>1</sup> Part *d* is *a priori* fairly certain, and is supported by the following: Pl. LVI, 271, frag. J, <sup>2</sup>, evidently from ; H.C. 55+59 from ; also in H.C. 40.

This style of referring to the Queen was evidently an unusual one; I have sought in vain for any instructive parallel to it. She is called in DAVIES, V, Pl. 13, and with reference to the it may be pointed out she is exceptionally called instead of the regular in Pl. XLIII, fig. 5 (twice), DAVIES, II, Pls. 29 (twice), 32, 38 (twice).

2. An original inscription "the Shade-of-Rē<sup>c</sup> of the Queen .... of the Maru of the Aten," with small variants, was altered to "the Shade-of-Rē<sup>c</sup> of the King's daughter, Meritaten, in the Maru of the Aten," also with variants. See Pl. LVI, 273, obv., rev., 271, frag. B; cf. also H.C. 66.<sup>3</sup> The is traceable in Pl. LVI, 273, rev. The traces of other signs in this place are obscure, as is also the meaning of *n* in the original *n p' m:rw*. It will be noticed that in Pl. LVI, 273, rev. the words *p' m:rw* have been erased and inserted anew, probably so as to fill more space than originally. Whether this explains the surcharging of *m:rw* in H.C. 105, and of *m:rw* [*n p' Itn*] *m :yt-itn* in H.C. 100, seems uncertain.

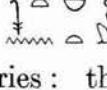
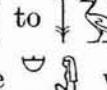
3. We find Meritaten's name and/or titles surcharged on a number of fragments of which not enough is left for the context to be inferred: H.C. 67, under [*:yt?*] *Itn n*; 58, where apparently was first surcharged;<sup>4</sup> 102, horizontally under horizontal cartouche of King;

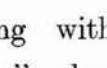
<sup>1</sup> A vertical stroke is common to all.

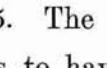
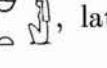
<sup>2</sup> Wrongly given as in the plate.

<sup>3</sup> The of this phrase occurs also in H.C. 83, obv.

<sup>4</sup> This fragment is not alone in showing apparent traces of double overworking; cf. also H.C. 45, 104.

47, 63, 73, 79, 119, 120, R.C. 2 (?), 3, 5, 8, 9, 37, 39 (over *'nh Itf'*), 40, Pl. LVI, 271, frag. m (at A ?) perhaps also in H.C. 43, where the beard of the determinative may be a chance cut. The alteration of  to  in Pl. LVI, 271, frag. s, need not form the basis of far-reaching theories: the  was probably painted out.

4. In H.C. 104 some words beginning with  are erased<sup>1</sup> and "the King's daughter, of his body, his beloved . . . ." placed at the side on a previously blank surface. From the rough cutting of this inscription it seems almost certain that it is secondary. This was apparently also the case in H.C. 35.

5. The King's title  is surcharged on an erasure in R.C. 1. A , later erased, seems to have stood below the cartouche in H.C. 56.

Regarding plastic alterations: in the stelae shown Pl. XXXIV, figs. 1 and 2, Pl. XXXII, fig. 2, the Queen's head has been modified, obviously in order to resemble that of Meritaten. In the last-mentioned stela Meritaten originally figured on both sides; on the left she has been effaced.

#### MARU-ATEN V.

A portion of the Queen's cartouche, uneffaced, occurs once, H.C. 125. H.C. 121, 126, 128<sup>2</sup> show remains of modifications falling within the scheme discussed as Class 1a, b under "Maru-Aten II" above, and H.C. 124 conforms with Class 1c.

The following is a summary of these details:—

**MARU-ATEN VIII.** The Queen's name and titles were mostly left untouched on the blocks; on the columns her inscriptions were roughly effaced, and her representations altered to do duty for Meritaten. Meritaten figured here originally, and her original inscriptions contained the usual affiliation to the Queen, which was not effaced.

**MARU-ATEN II.** The Queen's name has been everywhere erased and replaced by that of Meritaten, whose surcharged inscriptions do not contain the affiliation to the Queen. Contrary to custom, Meritaten seems originally to have figured hardly at all in this building. Part of Maru-Aten II was originally the "Shade-of-Rē" of the Queen, but at some time after its completion, during the King's lifetime,<sup>3</sup> it was converted into the "Shade-of-Rē" of Meritaten.

**MARU-ATEN V.** The Queen's name was left intact, and was also effaced and replaced by the daughter's; in respect of the inscriptions M. V occupies an intermediate position between M. VIII and M. II, so far as can be judged from the scanty material.

<sup>1</sup> Cf. Pl. LVI, 273, obv. (at C).

<sup>2</sup>  "good ruler" instead of  "good god"? Cf. p. 152, note 4, above.

<sup>3</sup> This is shown by Meritaten's titles.

To these conclusions must be adduced those drawn from the occurrences of the earlier and later forms of the Aten's name (see p. 150 above):—

M. VIII: Built mostly *before* the ninth year.

M. II: Built mostly, if not wholly, *after* the ninth year.

M. V: Scanty evidence indicates both periods.

Combining these, we have:

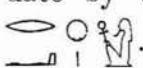
M. VIII. Built early,<sup>1</sup> with quite normal inscriptions etc.; altered, perhaps in only one part, and presumably late, at the same time as the alterations in M. II, with the purpose of suppressing the presence of the Queen and replacing her by Meritaten.

M. II. Mostly built late, in part at least as the Queen's "Shade-of-Re<sup>c</sup>," and with very little mention of Meritaten; then converted during the King's reign in the daughter's interest, with total suppression of the Queen's existence even as Meritaten's mother in the customary affiliation.

M. V. As far as the slight evidence goes, built early and continued late, and in part altered in Meritaten's interest.

The changes made were too far-reaching to be accounted for by the conversion of the "Shade-of-Re<sup>c</sup>" of M. II to Meritaten's use, the Queen being given a larger Shade-of-Re<sup>c</sup> elsewhere, and we are driven to one of two theories to explain them: (a) the Queen died, and was then no longer deemed to require her Shade-of-Re<sup>c</sup> (the conception of which was doubtless entirely different from that of a funerary temple<sup>2</sup>), or (b) that she fell into disgrace or in some other way ceased to play her previous part in the royal family, and that the place was then handed over to her eldest daughter.

The evidence which would justify us in choosing between these alternatives is lacking; but two points may incline us to support the latter one. (a) The absence of the usual affiliation to the Queen may be due merely to lack of space or energy, but it has perhaps a deeper motive. (b) In SHARPE, *Egyptian Inscriptions*, II, 48, a block is figured which probably formed the base of a statuary group (DAVIES, II, p. 25, note 1), and which contains the names and titles of only the Aten, Akhenaten and Meritaten. The affiliation (, etc.) of the last occurs twice, but in each case the Queen's name is effaced, the text being otherwise, with one exception, quite well preserved.<sup>3</sup>

The statue-base in question has a further relevance to Maru-Aten; for its inscription speaks of Aten as being "in the Shade-of-Re<sup>c</sup> of . . . . . Meritaten . . . . . in the House-of-Rejoicing of the Aten in the Temple of Aten in Akhetaten," and shows its early date by the fact that the name of the Aten is in the earlier form, also by the writing . Thus Meritaten had a Shade-of-Re<sup>c</sup> in the Temple of Aten, some distance

<sup>1</sup> "Early" and "late" here mean before and after the ninth year respectively.

<sup>2</sup> A Shade-of-Re<sup>c</sup> is built "for the Aten," cf. Boundary Stela K/15, DAVIES, V, p. 30. Shades-of-Re<sup>c</sup> are discussed in DAVIES, II, p. 27, III, pp. 19 foll.

<sup>3</sup> If the Queen's disgrace or retirement is indeed the explanation, it must be placed after the twelfth year; cf. DAVIES, II, Pl. 37, III, Pl. 13, where the Queen is associated with the King in a ceremonial dated to that year. Wine-jar graffiti of Nefretiti's estate are dated years 10 and 11, see p. 166 below, where a further point is mentioned (note 9) which might be invoked in favour of her death or retirement before the end of the reign.

away from Maru-Aten, before M. II was built. But why did the daughter receive one before the mother? and what did she want with two? Was an earlier Shade-of-Rē<sup>c</sup> built also for the Queen in the Temple of Aten, as the King had indeed sworn should be done (Stela K/15)? No trace of one has yet been found, but the evidence seems to point to the Shades-of-Rē<sup>c</sup> of both mother and daughter successively migrating from the Temple to Maru-Aten.

#### THE NAME "MARU-ATEN."

The above is a convenient form of the name occurring in our inscriptions as *p' m rw n p' Itn*, a Late-Egyptian wording<sup>1</sup> of which *m rw Itn* would be the earlier equivalent. The name is found in M. II, see Pl. LVI, 273, 271, frag. B, H.C. 71,<sup>2</sup> 52, 100, 105 (surcharged in the two last); also in M. VIII, see Pl. XXXIV, fig. 3, and H.C. 135, 139 (*hr-ib [p' m rw]*, etc.), as well as two small unpublished fragments. There is thus no doubt that it covered the whole complex of buildings.

The word which is here spelt *m rw*, also *m rt*,<sup>3</sup> seems not to have been seriously studied;<sup>4</sup> as it has a definite bearing on the nature of the site, some discussion of it may be allowed here. It is very variously spelt, although it does not occur very frequently; I know of no earlier examples of it than (a) in our Maru-Aten inscriptions. In the later New Kingdom it is found in (b) the expression "htp-measure (?) of the M.",<sup>5</sup> associated with articles of food, and (c) in the proper name *H<sup>c</sup>-m-m-l*, "Appearance in the M."<sup>6</sup> In Graeco-Roman times it occurs more often, in the temples of Philae and Edfu. At Philae it is said to the sacred falcon: (d) "Thou shalt reach thy M., thou Falcon in thy Window (*ssd*)!"<sup>7</sup> and (e) "Come to thy M., thou turquoise-haired (sic)! the Great Throne is open to receive thee;"<sup>8</sup> and he is said to be (f) "at the front of his M. in his Window of Appearing (*ssd n h<sup>c</sup>*)."<sup>9</sup> In the Horus temple of Edfu, Anubis is (g) "Protector of the M. of him who protects Egypt (i.e. Horus) . . . Defender of the Window of Horus";<sup>10</sup> an offering-chamber is called (h) "the place of adoration of the Rising One (*Wbn*), the M. of the rites of Horus";<sup>11</sup> and (i) it is said to Horus: "Come to thy M., thou fragrant-haired, thy way is straight to thy resting-place."<sup>12</sup><sup>13</sup> In calendrical inscriptions at the same temple there is talk of the god (j) "resting in the M. of Sesostris,"<sup>14</sup> "The House of Horus of Edfu," as it is called,<sup>15</sup> and (k) "the

<sup>1</sup> That the introduction of written Late Egyptian is primarily due to Akhenaten, and that the partial return to Middle Egyptian is a part of the reaction against his innovations, are facts that have not, I think, been pointed out.

<sup>2</sup> Associated with later form of Aten's name.

<sup>3</sup> Pl. LVI, 271, frag. B.

<sup>4</sup> I find only the articles in BRUGSCH, *Wörterbuch*, 586-7, with *Supplement*, 524-5, Devéria's note in *Journal Asiatique*, 1867, 440, and Chabas' discussion in *Etudes sur l'Antiquité historique*, 410-1. All three writers presume the meaning "fortress."

<sup>5</sup> Harris Pap., 17, a/14, 72/4.

<sup>6</sup> BURKHARDT, *Die altkanaanäischen Fremdworte*, No. 443.

<sup>7</sup> JUNKER, *Der Bericht Strabos über den heiligen Falken von Philae im Lichte der äg. Quellen*, in *Wiener Zeitschr. f. d. Kunde d. Morgenlandes*, XXVI, 45.

<sup>8</sup> *Ibid.*, 49.

<sup>9</sup> *Ibid.*, 48. I owe these three references to the author.

<sup>10</sup> DÜMICHEN, *Tempelinschriften*, 101/2.

<sup>11</sup> DÜMICHEN, *op. cit.*, 49/8.

<sup>12</sup> *Mnk<sup>t</sup>*.

<sup>13</sup> DÜMICHEN, *op. cit.*, 47/9.

<sup>14</sup> See note 1 on next page.

<sup>15</sup> BRUGSCH, *Drei Fest-Kalender*, IV/25.

M. of King Tuthmosis III;<sup>1</sup> offering everything good,”<sup>2</sup> and of (*l*) “proceeding to the M. of King . . . ,”<sup>1</sup> which is named *K'-śkbl*;”<sup>3</sup> also of (*m*) resting in, or circumambulating, “the Southern M.”<sup>4</sup> and (*n*) “resting in the M. and doing the ceremonies”<sup>5</sup>—these latter (*l-n*) referring to journeys of the cult image.

The M. is associated with the “Window of Appearing” or more shortly the “Window” in (*d, f, g*). This Window is well known in connection with royal palaces as being that at which the King appeared on ceremonial occasions to show himself to the people, to bestow gifts (this especially at Akhetaten), and to review troops and tribute;<sup>6</sup> and from the above quotations we see that certain gods also had their Windows at which they “appeared” to their adorers. The “Maru,” which is a building, is then clearly that one (or part of such) in which was the Window—(*f*) is specially significant in this connection—and thus would naturally itself become associated with “appearing.” This explains the proper name (*c*)—a reference to the King, most probably; and the etymology of “Maru” strongly supports this view. From Brugsch’s<sup>7</sup> time onwards there has been little doubt that the word, which has almost always the determinative of “seeing,” is connected<sup>8</sup> with the verb “to see.”<sup>9</sup> Its various spellings (*m:rw, m:s, m:l, m:rt, m:nr*) point, taken together, to the consonantal value *m:l*,<sup>10</sup> a value which there are grounds for ascribing also to the verb.<sup>11</sup> This excellently suits the building from which the King is seen, and the word may be rendered “viewing-place,” or “place of being-viewed.”

Now, although gods are found possessing a “Maru” and a Window as well as kings, they are solar gods alone (the sacred falcon of Philae is the “Manifestation—*b'*—of Rē”<sup>12</sup>); and further they are gods who are peculiarly identified with kingship. The falcon of Philae had a coronation-ceremony and mounted the throne as a king, his priests dated events by the years of his reign, and he was addressed as “thy Majesty.”<sup>13</sup> Of the specifically royal nature of Horus it is superfluous to speak; the King is, as King, Horus. It will be noted that the royal throne is associated with the god’s “Maru” in (*e*). Probably the inclusion of a “Maru” and a Window in the temples of solar gods was a transference from royal ceremonials rather than *vice versa*; for it would seem that in some cases not the concrete embodiment but the sun himself “appeared” through the Window (*h*)<sup>14</sup>—an example of the crocodile-on-a-perch class of anomalies, based on forced transferences of ideas, which the over-logical Egyptian so often produced.

<sup>1</sup> Doubtless these were not for the kings in question, but were built by them for the god (says Junker).

<sup>2</sup> *Op. cit.*, V/3.

<sup>3</sup> *Op. cit.*, IX, IIIa/4-5.

<sup>4</sup> *Op. cit.*, VI, II/13-4, 16.

<sup>5</sup> *Op. cit.*, V/4, 7.

<sup>6</sup> On the “Window of Appearing” see HÖLSCHER, *Das Hohe Tor von Medinet Habu*, 14, 49 foll., *Anast. Pap.*, I, 15/1, *Koller Pap.*, 5/1, and the references in BREASTED, *Ancient Records*, V, s.v. “Balcony.”

<sup>7</sup> *Wörterb.*, 587.

<sup>8</sup> Like many other words dealt with in BURKHARDT, *op. cit.*, it is out of place in that compilation.

<sup>9</sup> A parallel already pointed out by Brugsch (*Wörterb.*, 587) is *wb*;, the “outer court” of the temples, also determined with , derived from *wb* “to open, reveal,” and perhaps meaning actually that part which is visible to the public.

<sup>10</sup> “Maru” is a purely conventional pronunciation.

<sup>11</sup> I shall deal with this point elsewhere.

<sup>12</sup> JUNKER, *ibid.*, 51-4.

<sup>13</sup> JUNKER, *ibid.*, 51 foll.

<sup>14</sup> At Edfu, Prof. Junker points out to me, is a chamber into which the sun shone through an opening in the roof on to an effigy of the god.

All this agrees perfectly with the possession of a "Maru" by the Aten, the sun-god who is also the Over-king. The essential part of the el-Hawaṭeh site must have been a temple in which the sun was ceremonially "viewed," and it would be surprising indeed if this, the "Maru" proper, had not its "Window of Appearing" through which he shone. In view of the conclusions drawn above (p. 155) as to the relative dates of some of the buildings, it might be suggested that M. VIII (orientated roughly east-west), with its lake and dependent buildings east, was possibly the original "Maru" and was thus not at first an entrance-hall; and that it was later replaced by a larger "Maru" flanking it to the north, divided up into three separate buildings, M. II, M. IV and M. III (for no building in the northern enclosure is as large as M. VIII), and having a much larger lake and area.<sup>1</sup> M. II commends itself as the "Maru" proper in the Northern Enclosure by its temple-form and its axial position in the enclosure; it has the same orientation as M. VIII, and the conjecture may be permitted that at a certain time of the year, possibly the King's accession-day,<sup>2</sup> the Aten shone at dawn through an opening in the eastern enceinte-wall and through a "Window of Appearing" in the east wall of the temple, on to his Son at the altar, the Royal Family behind him, and the courtiers beyond in the large hall. The "Shade-of-Rē" of Nefretiti, later of Meritaten, will then have been one of the small buildings on the artificial island at the side of the temple.

#### B.—OTHER INSCRIPTIONS FROM THIS SITE.

The plaster casts, Pl. XXXII, fig. 3. These reproductions of parts of inscriptions, with roughly smoothed-off convex backs (resembling oval dishes) doubtless served as sculptors' models. They contain (a) cartouches and parts of the conventional formulae (Aten's name in later form), and (b) fragments, too small to be of much interest, of a religious text. The nature of these latter, and the occurrence of part of Meritaten's name with affiliation,<sup>3</sup> suggest that perhaps they were made elsewhere. From the east wall of the Southern Garden.

#### RIVER TEMPLE SITE.

No. 22/401, Pl. XLIII, fig. 3. On right, six vertical lines relating to the princesses in the chariot: "The King's-daughter of his body, his beloved, Meritaten, born of the Great King's-wife, Nefernefruaten-Nefretiti, living for ever: the King's-daughter . . . . Meketaten, born of . . . . Nefretiti" (with same wording as before). On the left, names and titles of the Aten accidentally erased; above and below this buildings are depicted.

No. 22/402, Room 8, Pl. XLIII, fig. 2, H.C. 148. From a scene of standard-bearers stooping low in obeisance to the King. The inscription is badly weathered, but the

<sup>1</sup> The wall of the Southern Enclosure is not earlier than that of the northern one, and seems to be a late addition to M. VIII.

<sup>2</sup> Which was regarded as being also the Aten's accession-day—see my *J.E.A.* article.

<sup>3</sup> Among small unpublished fragments.

following may be made out and restored:  " . . . [for] the ka' of the Captain of Bowmen, . . . archers (?), Standard-bearer on the King's right hand, . . . m (?) p: Itn (?)." On the last words see next paragraph.

Nos. 22/605,<sup>1</sup> 22/407, Pl. XXXV, fig. 5; Pl. XLIII, fig. 6. The former bears the inscription (a); the latter gives (b) over the representation of a man wearing the gold

(a) collars, royal gifts, which are characteristic of the period. At the first glance it is natural to take *nhw<sup>2</sup> ni-swt* as a title, "Protector of the King," followed by *m p: Itn* . . . , "in (the place or building) 'The Aten . . .'" I find *nhw ni-swt* elsewhere only in the jar-sealing *Pr-hd n nh-ni-swt*, "treasury of the King's Helper," figured PETRIE, *op. cit.*, Pl. XXXI, 45. Now "Protector of the King" seems a somewhat presumptuous designation for any Egyptian subject, and an alternative is to see in *nhw ni-swt m p: Itn* the name of the "River Temple" complex of buildings: "The King's protector is the Aten." The former inscription would then read: ". . . he who is not neglectful regarding what is enjoined upon him,<sup>3</sup> Craftsman of 'The-King's-protector-is-the-Aten' . . .," and a personal name would have followed. The block dealt with in the preceding paragraph perhaps contained the same phrase in the last line, which seems to end with   *Nhw-ni-swt* in the jar-sealing may perhaps be regarded as an abbreviation.

Nos. 22/406, 22/409. One block (406), and 71 fragments (409), of which most were very minute, of inscriptions and reliefs (11 fragments of the latter) finely incised and painted in bright colours<sup>4</sup> on a light but unusually fine white limestone. A selection of them is given in Pl. XLIII, figs. 1<sup>5</sup> and 5. The inscriptions seem to have been of quite conventional character: names (later form) of the Aten, names and titles of the King, name and titles ("the great King's-wife, his beloved, Mistress [of Upper and Lower Egypt]") of the Queen, and an address to the Aten (" . . . thou art the Aten . . .," ". . . mighty in . . .;" "thy beloved . . ." ". . . for the ka' of . . .").

<sup>1</sup> Bought in el-Hâg Kandil and therefore not quite certainly from the River Temple site.

<sup>2</sup> For *nhw* (also *nby* in late times) "to protect" cf. BRUGSCH, *Wörterb.*, 799, *Harris Pap.*, 78/12. In *Pianky*/11 it means "to reinforce" of soldiers, and a *nhw*, "auxiliaries, reinforcements," occurs *ibid.*/10. As time goes on it tends to become confused, graphically at least, with *nht* "to be strong"; compare the name     LIEBLEIN, *Namen-Wörterb.*, no. 790, with      op. cit., no. 2063, DARESSY, *Ostraca*, p. 106 (the name perhaps means "the protector is Mût," and may be compared syntactically with *Nhw-ni-swt-m-p:Itn*; in XXth Dynasty hieratic usually *Nhw-Mwt*, with assimilation); also the Graeco-Roman occurrences of *nh m'r m-wsr*, "protecting the weak from the strong," written with   cited BRUGSCH, *Wörterb. Supp.*, 694, with *nh m'r*, Cairo Stela 20539, I, b/4. A similar confusion is perhaps demonstrable in demotic.

<sup>3</sup> Restore *tm bg* (or *mh*) *hr rdyt m hr.f*, compare e.g. *Urk.*, IV, 959/14, 993/2.

<sup>4</sup> Lines and cartouches blue, also all signs, except      red,  black.

<sup>5</sup> This is the reverse of the large stone in fig. 5.

No. 411, Room 16, H.C. 149. The block has only *s:t-ni-šwt*, "King's-daughter," doubtless referring to Meritaten.

All the above are of the Akhenaten period. They show no suppression of the Queen's name and titles, nor any trace of a secondary insertion of those of Meritaten. The representations of the princesses riding out, and of buildings, of standard-bearers bowing low before Royalty, and of a man adorned with a gold collar, are of course common themes in the tombs, while the inscriptions in Pl. XLIII, figs. 2, 5, and Pl. XXXV, fig. 5, are in character common to tombs and houses. That several of the inscriptions relate to private individuals is noteworthy.

The following are from later periods :

No. 22/413, H.C. 157. From a large limestone slab forming part of the horizontal surface at the top of the low stone stairway. The hand-copy was made with considerable care, the inscription being studied a great many times in various lights, with a view to reproducing all traces of signs, and omitting other marks.<sup>1</sup> In its present form the inscription evidently contains the first cartouche (*a*) of Ramesses III. It is, however,

(*a*) clear that here, as in much else at Akhetaten, there has been overworking. But what stood originally? We see a  $\circ$  at the bottom of the , a  $\circ$  between  and , and  $\circ$ -like signs within  $\circ$ , at the tops of  and , and at the bottom of the cartouche; the  would appear to have been made over a . The large  seems to have been altered from the bottom of a cartouche; above it are vestiges of two  $\circ$  signs, and between it and the cartouche of Ramesses a ? and many obscure traces. A curious detail is the very deep, neat depression, V-shaped in section, cut in the middle of the , perhaps for the purpose of effacing something.<sup>2</sup>

This stone is of considerable significance for the history of the site. In view of the abundance of dressed stone that must have been available in the city for a long time after the death of Akhenaten, it is difficult to believe that a block bearing the name of Ramesses III was brought hither from a distance, and the probability that the name was cut on the spot is enhanced by the fact that an earlier inscription was erased to receive it. The evidence thus points to stones of Akhenaten being re-used by Ramesses III for a temple at el-'Amarneh. But the history of the block does not end here. It is quite clear that it was further re-used after the time of Ramesses; not only is his inscription much erased, but it must have been regarded as negligible by those who made the block part of a floor. A post-Ramesside rebuilding of, or addition to, the River Temple is thus certain.

No. 22/606, Plate XXXV, fig. 3. This stone was brought to us by a native of the place, who stated that it was found at the River-Temple site. It is not earlier than the XIXth Dynasty. The text over the man and woman reads: ". . . until (?)<sup>3</sup> eternity. Homage to thee, thou great (:) god, great (*wr*) in the Necropolis!" By the Overseer of Works, the justified Ia . . . .<sup>4</sup> and his sister, the married woman, Müt . . ."

<sup>1</sup> Hatching  here indicates very shallow depressions.

<sup>2</sup> Although very deeply cut signs are characteristic of this period (e.g. at Medinet Habu), the  sign is also then, so far as I have noticed, wholly sunk, and not merely its centre.

<sup>3</sup> [S] ?

<sup>4</sup> Name illegible to me.

## IMPRESSIONS OF STAMPS.

## A. FROM JAR-STOPPINGS.

A large number of mud jar-stoppings, bearing the impress of incised stamps, were found during the season—six in the Eastern Village, three in the main town-mounds, and 414 in Maru-Aten. These stoppings have in nearly all cases flat tops, varying from 0·09 to 0·14 m. (usually 0·11 to 0·12) across, and sides going down with a pronounced outward batter. The mud was heaped from 0·06 to 0·10 m. (usually about 0·08) above the mouth of the jar and brought down the neck about 0·12 m. below the mouth on to the shoulder, the whole measuring from 0·17 to 0·21 m. (Fig. 30). The under side of the upper part of most stoppings shows impressions of palm-wood fibres, or the like, arranged cross-wise; these had evidently been placed over the mouth of the jar to prevent the mud from dropping. The stoppings are so even and regular in shape that it seems clear that they were moulded; probably a large lump of mud was placed on the jar and pressed down and over the neck with an earthenware mould of the shape of an inverted bucket. The mud used varies from a very fine dark earth to a coarse lightish grey, the difference being due to the admixture of sand. The stamp, the impressions of which have raised signs enclosed in an oval (only rarely rectangular) frame, also raised, was impressed once (in a few cases twice) across the top of the stopping and from two to four times vertically on the sides near the top, only one stamp being used for each stopping. The stamping was often carelessly done, and as in all but three cases the stoppings were found broken<sup>1</sup> the recovery of the original forms of the sealings was not easy; many of the copies have been built up from several impressions, all imperfect, of the same stamp.

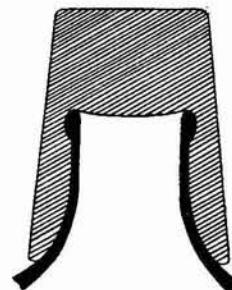


Fig. 30. Section of mud cap on jar. Scale  $\frac{1}{2}$ .

The following are translations of the wine-jar sealings figured on Pl. LV. Many of these resemble sealings published PETRIE, *op. cit.*, Pl. XXI; references are given to these latter, also to similar sealings of this and later reigns found at Thebes.

“Wine of the House of Aten,” F, G, H, N, U, W, X, Y, Z, MM, NN, XX, and probably also KK<sup>2</sup>; *cf.* PETRIE, *op. cit.*, xxii, 14–18, 26, 31.

“Very good wine of the House of Aten,” E; *cf.* P.<sup>3</sup> xxii, 11–13.

“Wine of the Mansion of the Aten,” V; *cf.* P. xxii, 52.

“Very good new wine (? — *sdh*) of the House of Aten,” D.

“Good wine of the House of Akhenaten, the living,” I; *cf.* P. xxii, 3–5.

<sup>1</sup> Usually only the head of the stopping, the most solid part, was preserved; *cf.* Fig. 30.

<sup>2</sup> G and H are to be restored *Itn irp [ni pr]*; KK, [*Itn pr*] *ni irp*. The (merely graphic) inversions of the words *irp ni pr Itn*, namely *Itn pr irp ni*, *Itn irp ni pr*, *Itn pr ni irp*, *Itn ni pr irp*, are worthy of note, as also the writing of *Itn* with the “determinative” first.

<sup>3</sup> Here and below = PETRIE, *op. cit.*

"Wine of the House 'Rē' is propitiated,"<sup>1</sup> Q, T, OO; cf. P. XXI, 20 (probably = T).

"[Wine of the House] 'Aten is propitiated,'<sup>1</sup> P; cf. P. XXI, 19 (also 21?)

"Wine of 'Rē' in the Barque (?),'<sup>2</sup> K, L; cf. P. XXI, 22, 57.

"Wine of Lower Egypt," PP; cf. P. XXI, 29.

"Good wine of Memphis (?),"<sup>3</sup> S.

"Very good wine of the Western River of the people of Lower Egypt,"<sup>4</sup> A; cf. P. XXI, 35,<sup>5</sup> 36, QUIBELL, *Ramesseum*, Pl. XI, 18, 27, 37.<sup>6</sup>

"[Very good (?) wine of] the Western River," QQ; cf. PETRIE, *Six Temples*, Pl. III, 23 (a stamp).

"Wine of the Southern Pool," C.

"Wine for offerings (?)<sup>8</sup> of the Storehouse of Tribute,"<sup>9</sup> AA, DD; cf. P. XXI, 23, 51.

"Wine for offerings (?)<sup>8</sup> of the Storehouse . . . . .," BB; cf. P. XXI, 7, where  must be an error for .

"Very good wine for offerings (?)<sup>8</sup>," CC.

"Wine of . . . . .," R, JJ, ZZ.

"Wine," J, O (the latter with a curiously decadent spelling of the word<sup>10</sup>); cf. P. XXI, 27, QUIBELL, *ibid.*, 21.

"The Storehouse of . . . . .," EE.

"House of Aten . . . . .," LL.

"House of Aten . . . . . living . . . . .," YY.

A number of stamps, doubtless for wine-jars, mention neither the nature nor the origin of the jar-contents, but seem to be distinguishing mottoes or marks. The most interesting are those in which the first sign is a uraeus, sometimes bearing one or two plumes,<sup>11</sup> standing over either a *nb*-basket<sup>12</sup> or a "gold" sign, and followed by epithets. The epithet "Lady of Lower Egypt" (M) makes it highly probable that the uraeus represents Wazyt-

<sup>1</sup> On these places cf. p. 144, note 2, p. 166, note 6. The writing *shtpi* of T is curious.

<sup>2</sup> The first sign is doubtless a condensed writing of *Rē m wi*.

<sup>3</sup> For wine of Memphis at Akhetaten cf. P. XXV, 93.

<sup>4</sup> On the Western River see p. 167. For the writing of the *t* in *itr* with  cf. the nearly contemporary use (e.g. by Ay) of this sign in *it-ntr*, "father of the god," alluded to by SETHE in *Nachrichten d. Ges. d. Wissensch. zu Göttingen, Philologisch.-hist. Klasse*, 1922, 219.

<sup>5</sup> Evidently from a defective example of A.

<sup>6</sup> The  under the bird in some of these occurs often elsewhere, and is evidently not phonetic.

<sup>7</sup> Or Lake, Canal.

<sup>8</sup> "For offerings" is a tentative translation of *m̄c* in these three sealings; the word being often used of despatching or destining animals, goods, etc. for temple offerings. The *prima facie* meaning "genuine" is unlikely in connection with wine.

<sup>9</sup> *Inw*, also used of fiscal contributions.

<sup>10</sup> Cf. the writing *iwbr* for *ibr* Pl. LXIII, graffito B.

<sup>11</sup> It wears the disk in P. XXI, 38, 41.

<sup>12</sup> Except in RR, the *nb*-sign under the uraeus is evidently to be read separately as *nbt*, "Lady." Not only does the sense require this, but we have also the added *t* in II and the different position of *nb* in P. XXI, 38, 39. In RR, however, the *nb* seems to be merely the usual support of the snake-goddess—so certainly also in P. XXI, 41, where we have only the uraeus on a *nb*: "Wazyt."

Buto, the great tutelary serpent-goddess of the Delta,<sup>1</sup> and I therefore translate tentatively "Wazyt" throughout. The *nfr*-sign, which occurs several times behind the uraeus, is doubtless to be taken as an addition referring to the jar-contents rather than to the goddess; so certainly with the double *nfr* under the uraeus in FF.

"Wazyt, Lady of Lower Egypt," M; cf. P. xxi, 40 (same stamp?) and "Wazyt of Lower Egypt," P. xxi, 42.

"Wazyt, Gold,<sup>2</sup> the *Ka'* of Gold: very good (wine)," FF.

"Wazyt, Lady of Wealth (*k'*), Mistress of Profusion," GG; cf. P. xxi, 39, with a different arrangement of the signs and an added *nfr*, "good (wine)," also P. xxi, 43.

"Wazyt, Lady of Profusion: good (wine)," HH.

"Wayzt, Gold,<sup>3</sup> Lady of Wealth, Mistress of all Things: good (wine)," II.

"Wazyt, Mistress of Wealth: good (wine)," RR; cf. ". . . . . Lady of Wealth," P. xxi, 44, also PETRIE, *Qurneh*, Pl. XLVI, 15, 16.

With these may be compared the important sealing "House of Wazyt, Lady of Wealth: good (wine)," P. xxi, 38.

Assuming the reading "Wazyt" to be correct, it indicates the Delta as the source of the jar-contents. It also implies the toleration by Akhenaten of the cult of Wazyt in the Delta. A difficulty certainly arises here; but it is perhaps not a great one in view (a) of the uraeus-nature of Wazyt, (b) of the constant association of the uraeus with the Aten-disk, and its employment as the commonest decorative motif at Akhetaten, and (c) of the manifold evidences of a serpent-cult in the city (see p. 66). Possibly the uraeus which accompanies the Aten-disk was definitely identified with Wazyt, whose name means "the uraeus."<sup>4</sup> An alternative view would be to regard the uraeus as representing Neith, for a wine-jar graffito P. xxiv, 85 gives □,  "House of Neith, Gold, who (?) ...." The epithet "Gold" says something for the identification, which, however, raises more serious difficulties than the other for this period.<sup>5</sup>

Other stamps, similar to the foregoing in mentioning neither the nature nor the origin of the jar-contents,<sup>6</sup> are:—

"The Lord of Wealth, Rich in Goods," B.

". . . . . Aten, Rich in Goods,"<sup>7</sup> SS.

Throne-name of Akhenaten<sup>8</sup>?, UU; cf. P. xxi, 6, QUIBELL, *Ram.*, 4 (from a brick), 46.

First name of the Aten, later form ?, WW. Reading uncertain.

<sup>1</sup> This is also suggested in PETRIE, *Qurneh*, 13, in connection with two sealings of similar type (*temp. Sethos I.*).

<sup>2</sup> Cf. "Gold" as a name of Hathor.

<sup>3</sup> The sign under the uraeus here seems to be a combination of *nb* in *nbt* and (with the serpent's tail and the corresponding appendage on the left) *nb*, "gold."

<sup>4</sup> Sethe in *A.Z.*, 55, 90 foll.

<sup>5</sup> Griffith, *op. cit.*, 33, regards this graffito as dating from before the establishment of Aten-worship.

<sup>6</sup> Cf. also P. xxi, 46, 47, and the purely emblematic (?) 58, 59.

<sup>7</sup> Restoring the bottom as  Akhenaten is given this epithet on a scarab cited GAUTHIER, *Livre des Rois*, II, 353, and it is applied to Akhetaten in a hymn, DAVIES, V, Pl. II, line 6.

<sup>8</sup> The lines from the first sign are probably two rays which ended in hands.

It is much to be regretted that in no case was it possible to say that a given jar-stopping and a given wine-jar graffito belonged together. Such associations, had they occurred, would certainly have thrown more light on both classes of objects.

Unique among the sealings from jar-stopings is TT, "Incense of the Treasury . . ." Its rectangular frame was perhaps intended to distinguish it from the wine-jar stamps; for incense-sealings, *cf.* QUIBELL, *ibid.*, 29–31.

#### B. FROM BRICKS.

The small store-cellar of House P. 46. 21 was found to be constructed of bricks, many of which were stamped in the middle of the top face; stamped bricks do not appear to have been found anywhere else in Akhetaten. The stamp (VV) reads "The Warehouse of Service." *Sn*<sup>c</sup> means properly a place in which things are made by craftsmen as well as stored (thus distinct from *wd*, which is a mere magazine), and *smš* is used of cultual as well as of personal service. It seems evident that these bricks were originally destined for the erection of the establishment in question.

#### GRAFFITI.

About 152 graffiti,<sup>1</sup> mostly very incomplete, were found, a collection similar to that published in PETRIE, Pls. XXII–XXV. Pl. LXIII of this volume gives, in facsimile with transcription, those from the Eastern Village (A–M), the Main City Site (N–R), and two (S, T) found in isolated positions at Maru-Aten; Pl. LXIV gives, in transcription only, all that is of any significance from the 131 graffiti found at two points<sup>2</sup> in Maru-Aten IV, among masses of broken jars and mud-sealings. All are from potsherds except H, M and P on Pl. LXIII; H is from a small piece of limestone, M from a mud jar-sealing, P from a large oblate pebble about 0·19 m. across by 0·14 m. high. All are in ink, and all in hieratic except H, which looks like pen-trials, and M, in cursive hieroglyphs; F is perhaps an "owner's mark," but may be compared with the second line of C. The hieratic is often very cursively or badly written, especially in the wine-graffiti, and in many cases the writing is hardly visible; these facts largely account for the gaps in the transcriptions.<sup>3</sup>

<sup>1</sup> This term is not usually applied in Egyptology to ink writings on portable articles, but it is very convenient to do so, and I adopt it following a suggestion of Mr. Woolley's.

<sup>2</sup> From (a) the two small chambers shown full of wine-jars on the plan (Pl. XXIX)—116 graffiti, and (b) the north-east corner of the adjoining court—15 graffiti. To these two groups were given the collective catalogue numbers 213 and 204 respectively (see note on plate).

<sup>3</sup> Omitted from these two plates are: the oil-jar graffito mentioned page 168, note 2, below, from the Eastern Village; and from Maru-Aten IV unreadable fragments bearing only portions of the stereotyped wine-jar formula without any point of interest, and duplicates of 72. Here may be mentioned the graffito on a limestone block from Maru-Aten II, Pl. LVII, H.C. 109: ? Note that *ii* would be a more correct transcription than *ll* throughout Pl. LXIV.

DATINGS.—The regnal years mentioned all fall between 6 and 17 inclusive;<sup>1</sup> the following is a tabulation of them:—

YEAR.		GRAFFITI.						TOTAL.
6	..	J, <sup>2</sup> 3, 41, 42	..	..	..	..	..	4
7	..	5, 44	..	..	..	..	..	2
8	..	E (?), 46-8	..	..	..	..	..	3 or 4
9	..	T, 20, 21, 49-51, 75-7, 81, 82	..	..	..	..	..	11
10	..	1, 2, 4, 9-11, 14, 30, 52-5	..	..	..	..	..	12
11	..	I, 8, 56, 57	..	..	..	..	..	4
12	..	59-61	..	..	..	..	..	3
13	..	..	..	..	..	..	..	0
14	..	..	..	..	..	..	..	0
15	..	N	..	..	..	..	..	1
16	..	C	..	..	..	..	..	1
17	..	G, K	..	..	..	..	..	2
<hr/>								
6 or 16	..	S, 43	..	..	..	..	..	2
7 or 17	..	13, 45	..	..	..	..	..	2
10 or more	..	36, 62-5	..	..	..	..	..	5
11 or more	..	58	..	..	..	..	..	1

Thus nothing occurs to modify the conclusions arrived at by Griffith in PETRIE, p. 32, as to the chronology of Akhenaten's reign. There, as here, the series stops with the 17th year. Petrie found jar-graffiti of years 2, 3, 4 and 5, of which years 2 and 3 were assigned by Griffith to Akhenaten's successor. The sherd mentioned p. 168, note 2, below, apparently belonged to year 2 or thereabouts; it comes from the Eastern Village, which gives three out of the four highest datings, including the two of year 17, and which shows clear evidence of occupation into the reign of Tut'ankhamûn (see p. 67, above). That no dates which can be assigned to Akhenaten's successors occurs among the jar-graffiti from Maru-Aten is only to be expected, since all the evidence points to an abandonment of that place not later than Akhenaten's death. It will be noticed that the highest date from Maru-Aten is year 12,<sup>3</sup> and that years 9 and 10 are specially common there. Years 13 and 14 are altogether lacking.

THE WINE-JARS.—As Griffith has pointed out (PETRIE, p. 33), the commonest formula

<sup>1</sup> In the absence of other evidence as to the reign extending beyond year 17, no one will want to read the dating of I, Pl. LXIII, as "Year 21."

<sup>2</sup> No room for 16.

<sup>3</sup> It need hardly be pointed out that, unless evidence is forthcoming that the Egyptians drank their wine within a short period after it was made, only approximate chronological conclusions can be drawn from the datings of wine-jar graffiti. Closer limits may perhaps be assumed in the cases of *sdh*, if that means "new wine," and of the *iuf-dr* meat, as being more perishable. All our graffiti relating to the latter come from Maru-Aten, and the date is year 9 in the five cases in which it is preserved.

is: *H.t-sp X : irp n pr . . . n<sup>1</sup> itrw imnti :<sup>2</sup> hrī k:mw NN*, "Regnal-year X: Wine of the House of . . . of the Western River: Master of the Vineyard, NN." I, 1, 8 and 29 give the most complete examples of the formula. In only one case is a more precise date given than the year alone: 3, where the month is added. *Irp* is the word used for wine in all cases but one: 74, where we have *śdh*,<sup>3</sup> probably "new wine" (*cf.* P.,<sup>4</sup> 63-4). The wine is sometimes qualified, as on the jar-sealings, by *nfr-nfr*, "very good": S, 22, 74 (*cf.* P., 1, 3, 28).

The following is a list of the sources of wine mentioned:—<sup>5</sup>

- 1.\* House of Aten: *passim*.
2. House of Aten of the Mansion of [Aten(?)]: J.
3. The Vineyard of the House of Aten: 27; perhaps to be distinguished from No. 1 above.
- 4.\* House of 'Ankh-Aten: 6-13; *cf.* P., 29, 30.
5. House of "Aten is propitiated":<sup>6</sup> 14-19; *cf.* P., 19-22, also jar-sealing P, Pl. LV.
6. [House of ?] Akhenaten, the Long-lived: 66-9;<sup>7</sup> *cf.* P., 8, 88.
- 7.\* House of Nefernefru-Aten, Nefre(titi);<sup>8</sup> I, 1, 2.
- 8.\* House of the King's-wife, of the Western River: G;<sup>9</sup> *cf.* P., 11.
9. House of the King's-wife, of the Southern Oasis (El-Khargeh): K;<sup>9</sup> *cf.* "House of Aten of the Southern Oasis," P., 94.
10. House of the King's-daughter, [his] Beloved,<sup>10</sup> . . .: R.
11. House of the High-Priest-of-the-Sun (*wr m:w*): 20-1; *cf.* P., 6.
- 12.\*<sup>11</sup> House of Nebma'rē<sup>c</sup> . . .<sup>12</sup> (Amenophis III): 23-5; *cf.* P., 4, 7.
- 13.\* House of Amenophis(?): 22; *cf.* P., 12.
- 14.\* Western River: 26, 30, 32(?); *cf.* P., 15.
15. Thel (Sile):<sup>13</sup> N.

<sup>1</sup> 4 has *m*; *cf.* PETRIE, No. 20.

<sup>2</sup> In 47 a dash (hardly *n*) separates *imnti* and *hrī*; *cf.* PETRIE, No. 4.

<sup>3</sup> *Cf.* the jar-sealing D on Pl. LV.

<sup>4</sup> Hereafter "P." refers to the graffiti published PETRIE, Pls. XXII-XXV.

<sup>5</sup> An asterisk indicates that the words "of the Western River" also occur.

<sup>6</sup> It is unlikely that *Śhtp-Itn* is a name for a king, as suggested by Griffith (*loc. cit.*), since, except in P., 22, not the whole expression, but only the *Itn*, is enclosed in a cartouche.

<sup>7</sup> That these are wine-jar graffiti may be inferred from P., 8, and from the fact that "of the Western River" was probably added—note the *n* of 66, 68.

<sup>8</sup> That this is an abbreviation of the Queen's name is rendered certain by the addition of the feminine *'nhlt*, "living."

<sup>9</sup> It will be noticed that these bear the highest dates, year 17 (years lost in P.), and that there the Queen is not mentioned by name. Were they from estates held by the Queen *ex officio*? or is it possible, in view of the remarks on p. 155 above, that we have here a later wife, and not Nefretiti, whose graffiti are of years 10 and 11?

<sup>10</sup> Not Meri[taten], which would of course be written *Itn-mryt*; but this name is most probably to be restored after *mry[t:f]*.

<sup>11</sup> *Cf.* P., 4.

<sup>12</sup> With some addition illegible to me.

<sup>13</sup> On the position of this Delta town see Gardiner in *J.E.A.*, V, 242-4. For wine therefrom consumed at Thebes *cf.* Gardiner, *ibid.*, 244, note 1, also QUIBELL, *Ramesseum*, Pl. XI, No. 19.

"Estate" would probably be throughout a better rendering than the literal "House." The "Western River" was conjectured by Griffith, *op. cit.*, 33, to be the Bahr Yûsef canal, which runs past Akhetaten west of the Nile. This identification is however no longer tenable. That it was in the Delta is now certain; as to its more precise location, the somewhat puzzling evidence points to its being the lower part of the Canopic arm of the Nile.<sup>1</sup> We evidently have to do, in Nos. 1-13, with a number of vineyards forming parts of the estates of the Aten, the Royal Family, the High Priest, and the deceased Amenophis III.

The names of the vineyard-masters<sup>2</sup> are, with but few exceptions, much damaged or missing. Of the complete ones we have *Sm-r-m-i* (doubtless Semitic), J, *Pa'*, L, *P-h*, 17, 18, *R-i*, 28, 29, Parennûfer, 33, *T-n* (or *M-t-n* with haplography?), 34; less complete Bensumer(?), G, *Pa-atenem[hab ?]*, 35, [A]tennakht(?), 40. None of the names can be certainly identified with any in the graffiti published by Petrie.

Remains occur of other formulae than that discussed above; 1-5 are headed "Tithe of the . . ." followed by illegible signs in 1 and 2, while "the Aten," 71 (cf. P., 3, 55<sup>3</sup>), and "the mansion of . . ." 73, are also noteworthy. Finally, eight sherds bore only *irp*, "wine,"<sup>4</sup> in large uncials: 72; this was doubtless an inferior quality with no guarantee as to vintage.

**THE PRESERVED-MEAT JARS.**—75-84, all from Maru-Aten IV, and all of year 9 where the date is not lost. The formula ran: *H:t-sp X: iwf dr (n) msw Itn n<sup>5</sup> shyt<sup>6</sup> k; n 'nh-R<sup>7</sup>* (variant, *n<sup>5</sup> shyt pr Itn m sht-Itn<sup>8</sup>*), "Regnal-year X: pounded(?) meat of the oxen(?)<sup>9</sup> of Aten, of the kitchen(?) of the *Ka*' of 'Ankh-Rê' (variant, "of the kitchen(?) of the House of Aten in Akhetaten.") For similar graffiti cf. P., 43-57, 87. The term *iwf dr* is discussed by Griffith, *loc. cit.*; as *dr* means "to remove," it may have meant "meat removed from the bones." It was probably pounded and salted, and, at least in the cases of P., 57, 53, was locally prepared. The meaning of *shyt*, for which Griffith (*loc. cit.*) suggests "kitchen," still seems quite uncertain. With *shyt (n) k; n 'nh-R<sup>c</sup>* cf. the *sn<sup>c</sup> n k; n 'nh-R<sup>c</sup>* of P., 54, 87. In spite of the analogy of *'nh-Itn* in 6-13, it is tempting to see in *'nh-R<sup>c</sup>* an abbreviation of the "didactic" name of the Aten, first cartouche, which begins with these words in both the earlier and later forms.

The sherds bearing these graffiti were of a different ware from those of the wine-jars, denser, with a greenish tinge, and having a polished surface ill-adapted to receive ink.

**OTHER PRODUCTS.**—"Ointment": Q. "Ibr-salve(?) . . . 2": B. "*M<sup>c</sup>-i-t*, second (quality?), of Per-Aten": A; the word is not known to me elsewhere, but cf. *M<sup>c</sup>-i-r-t*,

<sup>1</sup> See the discussion by Gardiner in *J.E.A.*, V, 130-1: also, for two new references, Spiegelberg in *A.Z.*, 58, 29. In PETRIE, *Six Temples*, Pl. III, no. 23, is figured a limestone stamp, "Wine of the Western River," for sealing jars (not a sealing itself, as stated by both Gardiner and Spiegelberg); its presence in Thebes is perhaps not difficult to account for if we assume that the Western-River wines were superior to the Theban vintages.

<sup>2</sup> Note the variant title *hri k:myw*, "master of the vine-dressers," 29, which becomes the normal one in later times (cf. SPIEGELBERG, *Hieratic Ostraka and Papyri found . . . in the Ramesseum*, Pls. XIX-XXXV, *passim*).

<sup>3</sup> Preserved-meat jar.

<sup>4</sup> So also in the jar-sealings J, O, on Pl. LV, and P., 27.

<sup>5</sup> Cf. especially P., 43, 46.

<sup>6</sup> 75 has *shyt n k; n 'nh-R<sup>c</sup>*.

<sup>7</sup> So 75, 77, 79, 80.

<sup>8</sup> So 82, 83. *M sht-Itn* is lost in these, but cf. P., 57, 53. Our 70 doubtless belongs to this formula.

<sup>9</sup> This rendering is suggested by SPIEGELBERG, *Kopt. Handwörterb.*, 302; GRIFFITH (*loc. cit.*), "children."

similarly written and probably a fruit, BURCHARDT, *Altkanaanäischen Fremdworte*, No. 449. C and D<sup>1</sup> are obscure.<sup>2</sup>

NAMES.—“Pawah,” a name already known to us from the Main Town site: M. “Meryu(?)” : O. “. . . (a title?), Waz-si” : P; for the name cf. LIEBLEIN, *Namen-Wörterbuch*, 1442, 1494.

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<sup>1</sup> Šn<sup>c</sup>, “warehouse,” on meat-jars, p., 54, 87.

<sup>2</sup> A sherd (Cat. No. 76), hardly legible, and with the date broken away, bore remains of a duplicate of p., 37 (which is of year 2): “. . . oil (*nhh*) of Per-[Aten] of [the consignment of the Chief of Archers] Re<sup>c</sup>son of May; purified by the superintendent of unguent, . . . ; the guardian Ipy.”

## APPENDIX A.

REFERENCE TABLES OF AMULETS, RING-BEZELS AND CLAY MOULDS  
FOUND IN 1922.

THE following tables give the various types of these objects found, and are continually referred to in the descriptive chapters of the volume. Amulets, ring-bezels and clay moulds were so common on the site that it was found advisable in 1922 not to take them up into the General Object Catalogue, but to deal with them separately. Consequently they were serially numbered each under letters, A for amulets, B for bezels, and M for moulds; and it is by these numbers that they are referred to throughout the volume. For purposes of comparison, references to the similar objects figured in PETRIE'S *Tell el Amarna*, Pls. XIV to XX are here given, the number of the object being preceded in each case by P.

## AMULETS (all of fayence).

A. 1-3. Bes with cymbals.	A. 27. Horus eye and <i>ankh</i> -sign.
4. Bes between two Taurts (plaque).	28. Bes.
5-6. Bes with cymbals.	29. Trussed ox.
7-8. Taurt.	30. Haunch of ox.
9. Bes with cymbals.	31. Bes.
10. Horus eye, blue and black.	32. Taurt.
11. Bes with cymbals.	33. Bes.
12. Bes.	34-35. Osiris head.
13. Bes with cymbals.	36-37. Bes.
14. Taurt.	38-40. Hathor head.
18. Bes.	41-42. Taurt.
19. Taurt.	43-46. Bes with cymbals.
20. Hathor head.	47. Bes with cymbals (large form).
21. Scaraboid with <i>ankh</i> -sign.	48. Cartouche of Akhenaten.
22. Bes with cymbals.	49-51. Bes with cymbals.
23. Hathor head.	52. Figure of Akhenaten.
24. Bes with cymbals.	53. Thistle head, blue and green.
25. Horus eye.	54. Bes.
26. Bes with cymbals.	

## RING-BEZELS (all of fayence).

## I. Bearing royal names:—

(a) Tutankhamûn.

B. 4, 5, 6, 14, 16, 18, 19, 20, 24, 27, 28,  
29, 30, 31, 35, 36, 40, 46.

(b) Akhenaten.

B. 25, 26, 32, 37, 44, 45, 51.

(c) Ankh-kheperu-re<sup>c</sup> (Saker<sup>e</sup>).

B. 15 and 42.

## II. Bearing designs:—

B. 1. Goat.

2. Lotus.

7. Horus eye.

8. Duck and papyrus.

B. 9. Lotus.

10. Lotuses.

11–12. Goat and disk.

13. Lotus (?).

17. Geometric design.

21. Ibex.

22. Flower.

23. *Nefer*-sign.

33–34. Floral designs.

38. Ibex.

39 and 41. Horus eye.

47. Palmette.

48. Horus eye.

49. Palmette.

50. Lotus.

52. Cow (yellow and black).

CLAY MOULDS FOR OBJECTS OF FAYENCE. (*Cf.* Pl. XIII, fig. 3.)

M. 1. Lily. P. 464.

2. Leaf.

3. Horus eye. P. 249.

4. Hathor head. Like P. 280.

5. Drop pendant. P. 550, but larger.

6. Bes with cymbals. P. 288.

7. Thistle head. P. 471.

8. Palm leaf. P. 254.

9. Human head. P. 247, but smaller.

10. Lotus stamens (?). P. 537.

11. Horseshoe form. P. 237.

12. Ring. P. 235.

13. Bes. P. 288 approximately.

14. Flower. P. 382.

15. Horseshoe-shaped ring. P. 238.

16. Bes with cymbals. P. 288.

17. *Nefer*-sign. P. 266, but smaller.

18. Roundel.

19. Flower.

20. Leaf.

21. Bes with cymbals.

22. Plain ring.

M. 23. Horseshoe form. P. 237.

24. Fruit. P. 455.

25 and 26. Bes with cymbals. P. 288.

27. Thistle.

28. Fruit (?). Resembles P. 566.

29. Palmette.

30. Poppy head. P. 475.

31. Ring. P. 238.

32. Bunch of grapes. P. 442 approximately.

33. Taurt. P. 299.

34–36. Horseshoe. P. 239.

37. Rosette.

38–40. Leaf.

41. Bes with cymbals. P. 288.

42. Palm leaf. P. 545.

43. Fruit. Rather like P. 455.

44. Palm leaf.

45. Finger ring. P. 238.

46. Fruit.

47. Palm leaf. P. 547.

48. Ring. P. 238.

M. 49. Ribbed cone.	M. 72. Marrow-like vegetable.
50. Ring. P. 238.	73. Fruit.
51. Lily. P. 462.	74. Palmette.
52. Drop pendant. P. 550.	75. Rosette.
53. Horseshoe. P. 239.	76. Trefoil.
54. Trefoil. P. 462.	77. Bes with cymbals.
55. Fruit. Rather like P. 442.	78. Rosette.
55b. Head of Bes: very large.	79. Lily.
56. Thistle head. Rather like P. 482.	80. Taurt.
57. Trefoil.	81. Bes with cymbals.
58. Thistle head.	82. Fruit.
59. Leaf.	83. Bes.
60 and 61. Bes with cymbals.	84. Leaf.
62. Horseshoe ring.	85. Globular bead.
63. Lotus.	86. Horseshoe ring.
64. Bunch of grapes.	87. Thistle head: very small.
65. Thistle head.	88. Bes with cymbals.
66-68. Bes with cymbals.	89. Horus eye.
69. Horseshoe ring.	90. Cartouche of Sakerē <sup>c</sup> .
70. Cartouche of Sakerē <sup>c</sup> .	91. Palmette.
71. Cartouche of the Disk.	

In addition to the moulds, moulded objects of fayence were found corresponding to the following types in Petrie's volume:—P. 259, 284, 287, 296, 307, 332, 388, 418, 424, 435, 436, 441-448, 462, 466, 471, 473, 545, 548, 550, 595.

## APPENDIX B.

## PRESENT LOCATION OF OBJECTS FOUND AT EL-'AMARNEH.

The numbers refer to the General Object Catalogues of the two seasons, 1921 and 1922.

CAIRO MUSEUM.	GLASGOW MUSEUM.
1921. Nos. 38, 133, 202, 421, 425, 470, 473, 520, 527.	1921. Nos. 82, 96, 105, 152, 193, 201, 234, 306, 370, 389, 392, 393, 420, 462.
1922. Nos. 37, 77, 82, 129, 146, 149, 158, 159, 167, 186, 211, 213, 214, 247, 252, 261, 268b, 269, 271, 281, 315, 330, 331, 332.	1922. Nos. 90, 130, 136, 161, 255, 330, 530, 586.
	THE HAGUE, HOLLAND.
	1922. Nos. 98, 181.
	LIVERPOOL INSTITUTE OF ARCHAEOLOGY.
	1921. Nos. 44, 50, 52, 66, 150, 182, 238, 252, 253, 262, 281, 336, 356, 390, 460, 504, 509, 530, 535, 539, 548, 549, 1001a.
	1922. Nos. 255, 279, 349, 368b, 572. Fresco pavement panel 16.
	LONDON, BRITISH MUSEUM.
	1921. Nos. 9, 13, 33, 40, 51, 62, 63, 68, 87, 94, 101, 126, 142, 144, 152, 154, 166, 181, 189, 194a, 194b, 198b, 200, 211, 212, 225, 226, 227, 228, 245, 270, 272, 284, 300, 301, 305, 307, 311, 313, 314, 331, 336, 342, 344, 347, 349, 355, 358, 374, 394, 395, 397, 411, 416, 433, 434, 448, 465, 469, 475, 476, 477, 478, 481, 493, 496, 511, 519, 534, 538, 540, 541, 545, 552, 1035, 1049a.
	1922. Nos. 2, 24, 72, 85, 100, 131, 182, 205, 207, 212, 253, 254, 268, 275, 289, 337 346, 401, 524, 528. Fresco pavement panel 13.
	CAMBRIDGE, FITZWILLIAM MUSEUM.
1922. Nos. 319, 333c.	
	COPENHAGEN, NATIONAL MUSEUM.
1922. Nos. 39, 79, 150, 165.	
	COPENHAGEN, NY CARLSBERG GLYPTOTEK.
1921. Nos. 163, 181, 488.	
1922. No. 249. Fresco pavement panel 10.	
	EDINBURGH, ROYAL SCOTTISH MUSEUM.
1922. Nos. 141, 189, 203, 408, 425, 502, 541, 558, 571.	

LONDON, HORNIMAN MUSEUM.  
1922. Nos. 116, 153, 593, 597, 599.

LONDON, SOUTH KENSINGTON.  
1921. Nos. 345, 350, 351.  
1922. Nos. 31, 121, 535, 578.

MANCHESTER MUSEUM.  
1921. Nos. 211, 250, 314, 321, 380.  
1922. Nos. 42, 83, 112, 172, 179, 193, 263, 275,  
503, 523, 525, 531, 536, 547, 565.

OXFORD, ASHMOLEAN MUSEUM.  
1921. Nos. 28, 30, 61, 80, 91, 98, 99, 115, 124,  
149, 155, 175, 182, 187, 217, 271,  
273, 309, 314, 318, 323, 375, 410,  
428, 436, 489, 502, 512, 523, 550,  
553.  
1922. Nos. 92, 210, 253a, 268a, 270, 273-4, 508,  
529, 537, 538, 573, 574, 583.  
Fresco pavement panel 14.

OXFORD, Pitt Rivers MUSEUM.  
1922. Nos. 99, 160, 423, 424, 518.

WELLINGTON (NEW ZEALAND), DOMINION.  
MUSEUM.  
1921. Nos. 21, 196, 220, 249, 259, 260, 285, 362,  
365, 413, 415, 437, 446, 459, 503.

UNITED STATES OF AMERICA.  
ANCIENT ORDER OF ROSAECRUCIANS.  
1921. Nos. 449, 476.  
1922. Nos. 132, 192, 292, 330a, 368a, 567.

BOSTON, EGYPT EXPLORATION SOCIETY.  
1922. Nos. 8, 10, 11, 17, 36, 142, 180, 273, 274,  
275, 276, 328, 344, 352, 416b, 579,  
595.

BROOKLYN MUSEUM, NEW YORK.  
1921. No. 474.  
1922. Nos. 80, 81, 86, 113, 138, 154, 158a, 185,  
199, 206, 267, 305c, 316, 358g,  
371, 374, 417a, 511, 527, 570.  
Fresco pavement panel 11.

CHICAGO, HASKELL ORIENTAL MUSEUM.  
1922. Nos. 35, 50, 133, 216, 217, 220, 256, 270,  
277, 345, 370, 416, 513, 526, 585.  
Fresco pavement panel 24.

CINCINNATI MUSEUM ASSOCIATION.  
1921. Nos. 29, 31, 39, 40, 94, 100, 105, 108, 119,  
121, 140, 180, 183, 190, 195, 204,  
221, 251, 255, 343, 367, 398, 403,  
414, 424, 426, 427, 440, 441, 493,  
501, 518.  
1922. Fresco pavement panel 12.

CLEVELAND MUSEUM OF ART.  
1921. No. 384.

COLORADO MUSEUM OF NATURAL HISTORY.  
1921. Nos. 40, 47, 158, 188, 203, 241, 246, 247,  
266, 278, 279, 314, 322, 327, 330,  
333, 357, 382, 383, 405, 494, 495,  
510, 521.  
1922. Nos. 5, 44, 62, 101, 125, 135, 219, 257,  
404, 417, 540, 564, 570, 577, 596.

NEW YORK, METROPOLITAN MUSEUM OF ART.  
1922. Fresco pavement panels 18, 21.

PITTSBURG, CARNEGIE MUSEUM.  
1922. Fresco pavement panel 1.

PHILADELPHIA, COMMERCIAL MUSEUM.  
1921. Nos. 10, 302, 303, 339, 348, 507.  
1922. Nos. 7, 20, 30, 33, 43, 47, 49, 51, 52, 54,  
55, 56, 60, 63, 66, 75, 87, 88, 93,  
95, 102, 103, 105, 106, 107, 108,  
109, 110, 111, 114, 117, 119, 120,  
127, 134, 143, 145, 148, 149, 152,  
158d, 183, 184, 188, 191, 194, 421,  
504, 519, 533, 549, 555, 557, 590.

SAINT LOUIS, ARCHAEOLOGICAL INSTITUTE  
OF AMERICA.

1922. Nos. 38, 54, 73, 94, 97, 136, 155, 320, 333,  
338, 345, 350, 406, 418, 419, 556,  
560, 564, 566, 569, 588, 598.

SAN DIEGO MUSEUM, CALIFORNIA.

1921. Nos. 6, 46, 49, 59, 89, 250, 335, 381, 412,  
431, 442, 485, 522, 525, 531.  
1922. Nos. 28, 78, 151, 187, 265, 330, 336, 340,  
342, 347, 351, 415, 546, 562, 575,  
581, 584, 592, 594.  
Fresco pavement panel 25.

SYDNEY, NEW SOUTH WALES,  
THE MITCHELL LIBRARY.

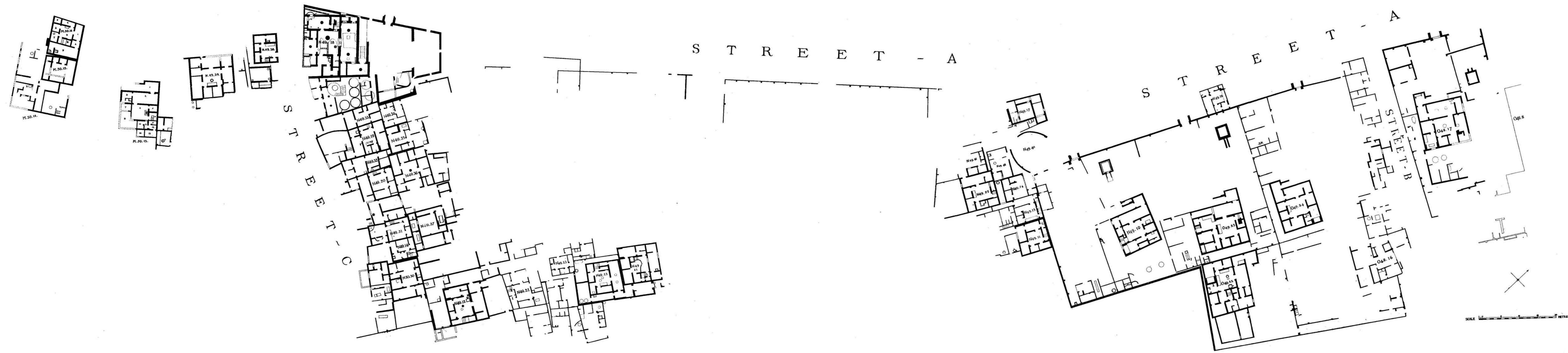
1922. Fresco pavement panels 7-9.  
TOLEDO MUSEUM OF ART.  
1921. Nos. 161, 528, 533.  
1922. Nos. 159c, 167a, 208, 285, 286, 287, 322,  
348, 355, 369, 506, 514, 550, 558,  
559.  
Fresco pavement panels 22, 23.  
WELLESLEY COLLEGE LIBRARY.  
1921. Nos. 19, 54, 83, 110, 197, 207, 210, 223,  
267, 353, 354, 363, 379, 387, 400,  
419, 450, 472, 484, 498, 499, 516,  
524, 529, 536.

## LIST OF PLATES.

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- I. Plan of principal excavations in the Main City, 1921-22.
- II. Plan of Main City Site ; area P. 46-47.
- III. Plans of various houses, Main City Site.
- IV. Restoration in colour of the Central Hall of the House of the Vizier Nakht, K. 50.1.
- V. Views of the House of Nakht, K. 50.1, and of House K. 51.1.
- VI. Main City : details of houses.
- VII. Main City : views in houses and gardens.
- VIII. Main City : details of houses.
- IX. Painted decoration from Maru-Aten I, Eastern Village, and House N. 49.18 in Main City.
- X. Objects chiefly from the Main City. *Scales* : Fig. 1,  $\frac{1}{4}$  : 3,  $\frac{2}{3}$  : 4,  $\frac{1}{7}$  : 5,  $\frac{1}{5}$  : 6, nearly  $\frac{1}{4}$  : 7,  $\frac{2}{3}$ .
- XI. Objects chiefly from the Main City. *Scales* : Figs. 1 and 2,  $\frac{3}{4}$  : 3,  $\frac{1}{1}$  : 4,  $\frac{1}{2}$  : 5,  $\frac{3}{4}$ .
- XII. Objects from the Main City and Eastern Village. *Scales* : Fig. 1,  $\frac{1}{8}$  : 2,  $\frac{7}{2}$  : 3,  $\frac{4}{5}$  : 4,  $\frac{1}{4}$  : 5, about  $\frac{1}{3}$  : 6 and 8,  $\frac{1}{4}$  : 7,  $\frac{2}{3}$ .
- XIII. Objects chiefly from the Main City. *Scale* marked in centimetres.
- XIV. Objects chiefly from the Eastern Village and Tomb-Chapels. *Scales* : Fig. 1,  $\frac{6}{11}$  : 2,  $\frac{1}{7}$  : 3, about  $\frac{1}{5}$  : 4,  $\frac{3}{5}$  : 5,  $\frac{1}{12}$  : 6,  $\frac{1}{11}$  : 7,  $\frac{2}{3}$  : 8,  $\frac{1}{9}$ .
- XV. Painted wall decoration from House N. 49.18. *Scale*  $\frac{1}{6}$ .
- XVI. Plan of the Eastern Village.
- XVII. Views in the Eastern Village.
- XVIII. Eastern Village : details of houses.
- XIX. Wooden objects from the Eastern Village.
- XX. Objects from the Eastern Village.
- XXI. Eastern Village : rope- and basket-work. *Scale* of Fig. 2,  $\frac{1}{6}$ .
- XXII. Eastern Village : wooden objects and basket-work. *Scales* : Fig. 1,  $\frac{1}{7}$  : 2,  $\frac{1}{3}$  : 3, about  $\frac{1}{8}$  : 4,  $\frac{1}{4}$ .
- XXIII. Eastern Village : objects of stone and pottery.
- XXIV. Plan of Tomb-Chapels 521-541.
- XXV. Plan and restored section of Tomb-Chapel 525. Plans of Tomb-Chapels 551-556.
- XXVI. Restoration of Tomb-Chapel 525.
- XXVII. Views of Tomb-Chapels.
- XXVIII. Stelae from Tomb-Chapel 525. *Scales* : Figs. 1-3,  $\frac{2}{9}$  : 4,  $\frac{3}{7}$ .

- XXIX. Plan of Maru-Aten.
- XXX. Plan and restored section of Maru-Aten II.
- XXXI. Maru-Aten : details.
- XXXII. Stonework from Maru-Aten.
- XXXIII. Sculptured blocks from Maru-Aten and from the Main City.
- XXXIV. Inscribed blocks from Maru-Aten.
- XXXV. Inscribed and sculptured blocks from various sources.
- XXXVI. Painted pavement from Maru-Aten I. Painted ceiling from Tomb-Chapel 551.
- XXXVII. Plan and section of tanks and pavement in Maru-Aten I.
- XXXVIII. Painted pavement from Maru-Aten I.
- XXXIX. Painted pavement from Maru-Aten I.
- XL. Restoration of painted column in Maru-Aten VIII.
- XLI. Plan of River-Temple Site.
- XLII. Views of River-Temple Site.
- XLIII. Inscribed blocks from River-Temple.
- XLIV. Painted pottery.
- XLV. Fragments of painted pottery.
- XLVI. Pottery, types i-iv.
- XLVII. Pottery, types v-ix.
- XLVIII. Pottery, types x-xx.
- XLIX. Pottery, types xx-xxv.
- L. Pottery, types xxv-xxxvi.
- LI. Pottery, types xxxvii-xliv.
- LII. Pottery, types xliii-lvi.
- LIII. Pottery, types lvii-lxxvi.
- LIV. Pottery, types lxxvii-lxxxv. Stone vases and small objects.
- LV. Impressions of stamps on mud-sealings.
- LVI. Hand-copies of stelae 22/271 and 273 from Maru-Aten II.
- LVII. Inscriptions from Maru-Aten.
- LVIII. Inscriptions from Maru-Aten and from the River-Temple.
- LIX. Inscriptions from Maru-Aten.
- LX. Inscriptions from Maru-Aten.
- LXI. Rough hand-copies of inscriptions from Maru-Aten.
- LXII. Examples of sculptured decoration from Maru-Aten.
- LXIII. Copies of hieratic graffiti with transcriptions.
- LXIV. Transcriptions of hieratic graffiti on jars from Maru-Aten IV.

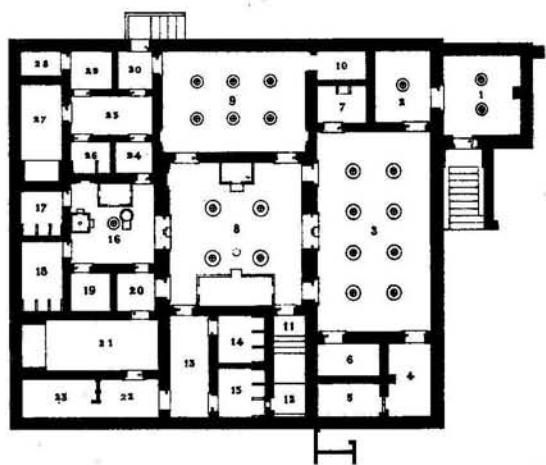
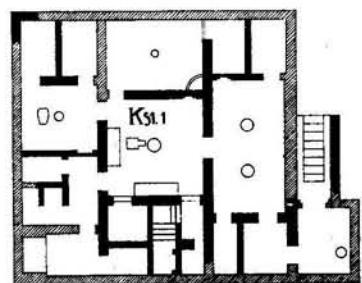


PLAN OF PRINCIPAL EXCAVATIONS IN THE MAIN CITY, 1921-22.



SCALE 1 0 5 10 15 20 METRES

Yükselten 11-12

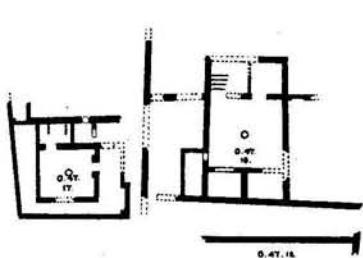
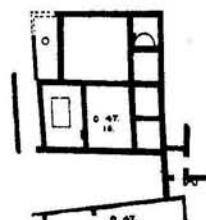
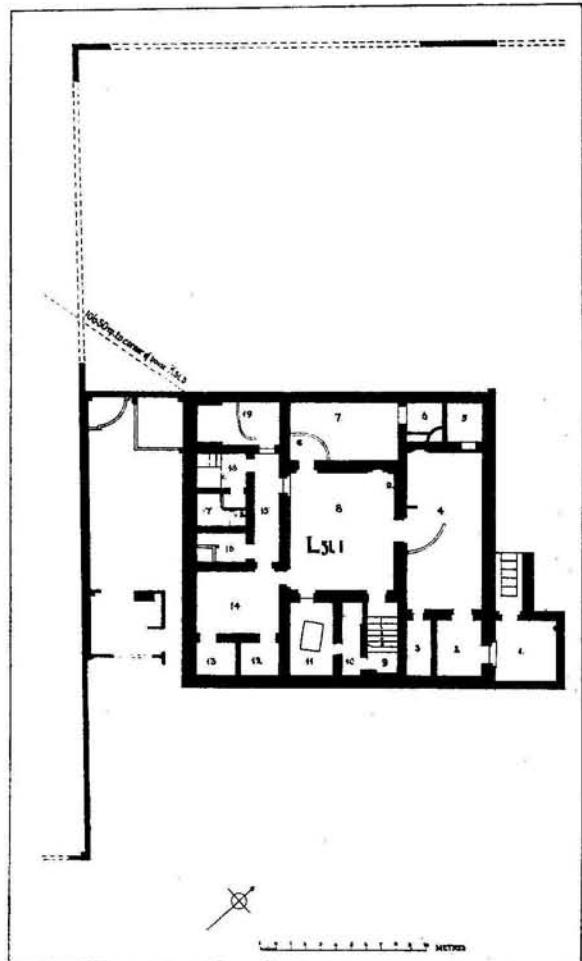


THE HOUSE OF THE VIZIER NEKHT.

SCALE 1 : 20 METRES



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 METRES



MAIN CITY SITE. VARIOUS HOUSES.

RESTORATION OF THE CENTRAL HALL IN THE HOUSE OF THE VIZIER NAKHT

K.50.1





1



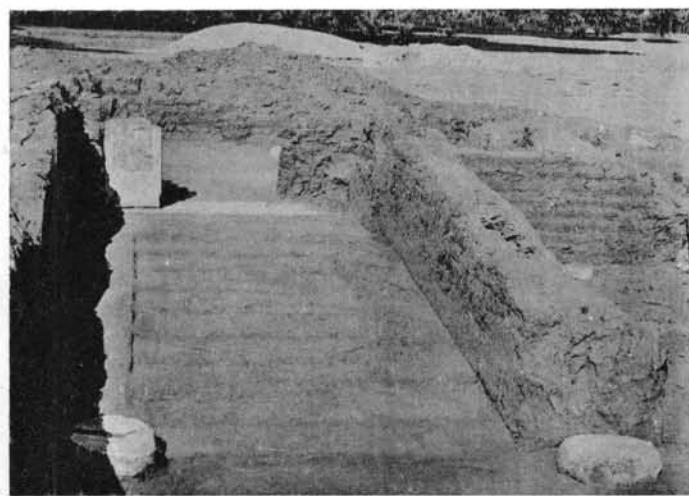
2



3



4



5



6

VIEWS OF THE HOUSE OF NAKHT, K. 50.1 (2-6), AND OF K. 51.1 (1)



1



2



3



4

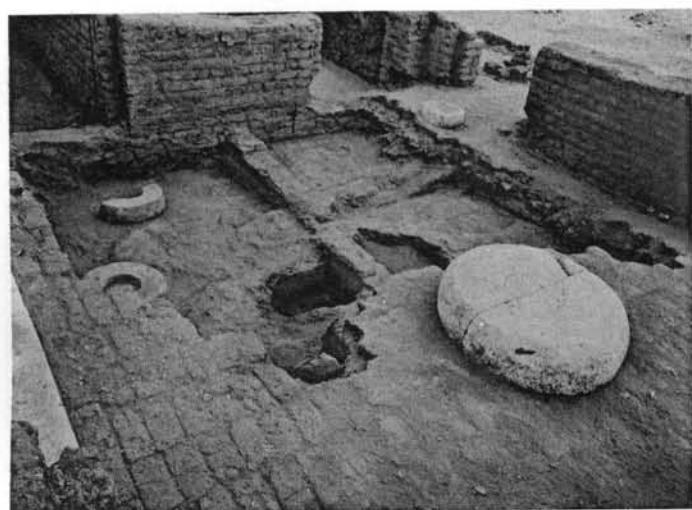


5



6

MAIN CITY. DETAILS OF HOUSES



1



2



3



4



5



6

MAIN CITY. HOUSES AND GARDENS



1



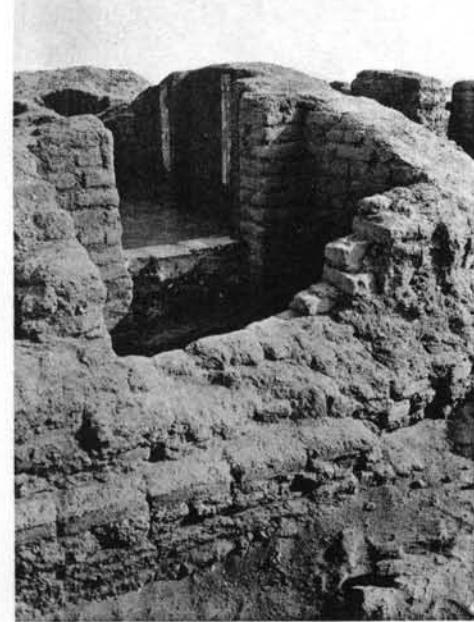
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5

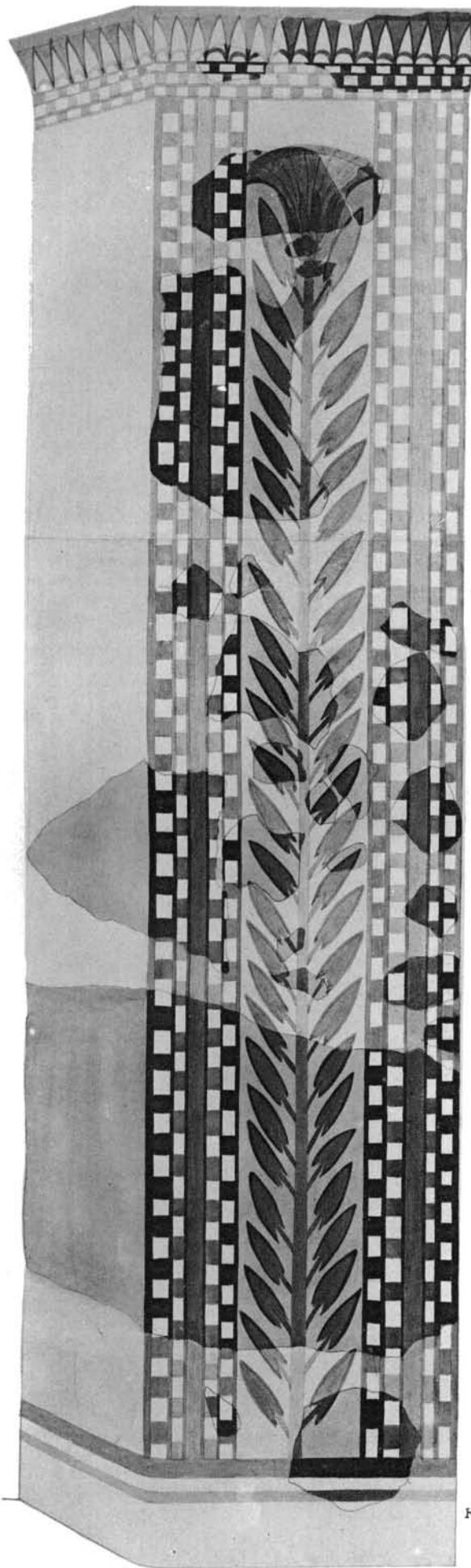


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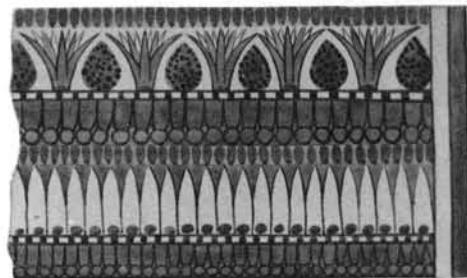
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MAIN CITY. DETAILS OF HOUSES



2

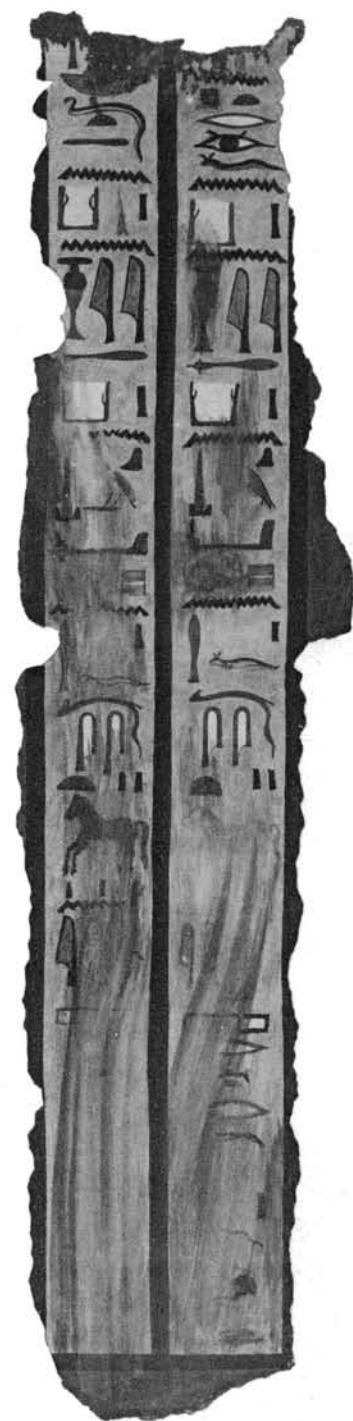
F.C.N.



1



2



2

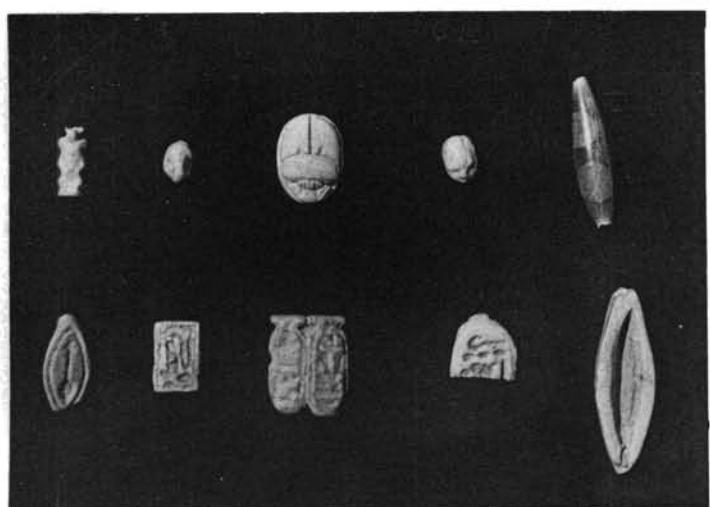
1. PAINTED PAVEMENT FROM MARU-ATEN I, panel 16. Scale  $\frac{1}{8}$
2. PAINTED PILASTER FROM EASTERN VILLAGE, No. 9, Main Street. Scale  $\frac{1}{8}$
3. PAINTED INSCRIPTION FROM NICHE IN NORTH LOGGIA OF N. 49. 18. Scale  $\frac{1}{8}$



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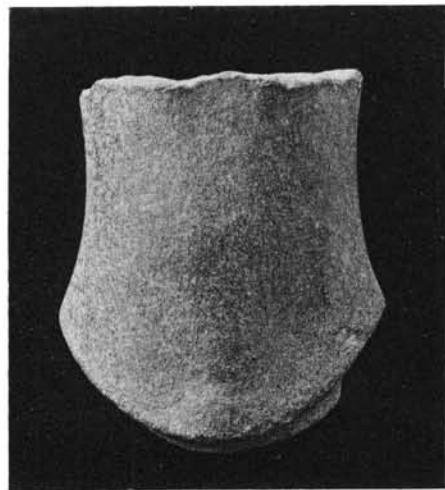
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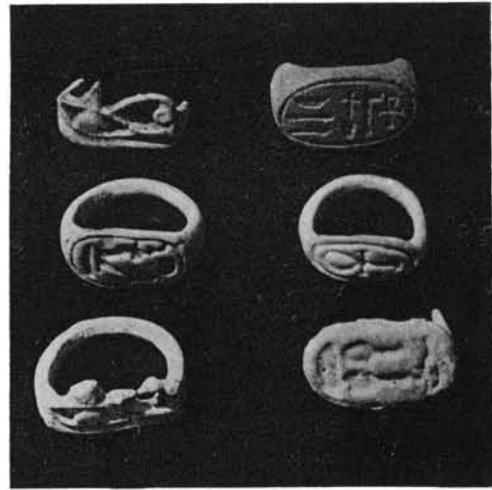
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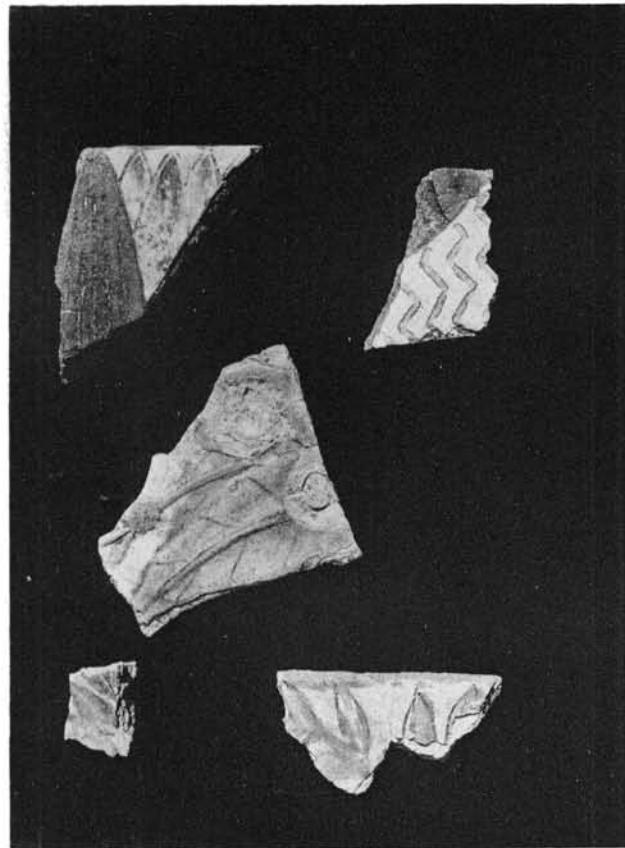
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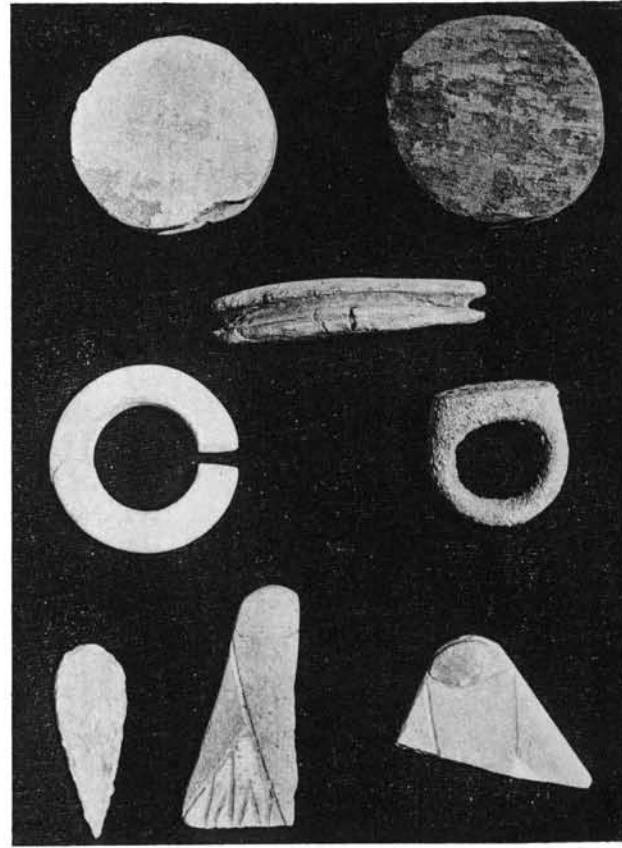
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3



4



5

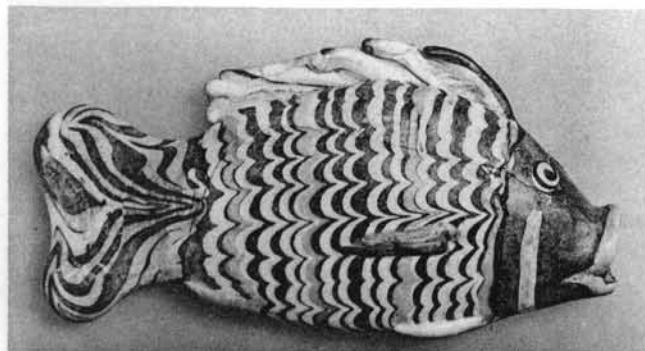
OBJECTS CHIEFLY FROM THE MAIN CITY



1



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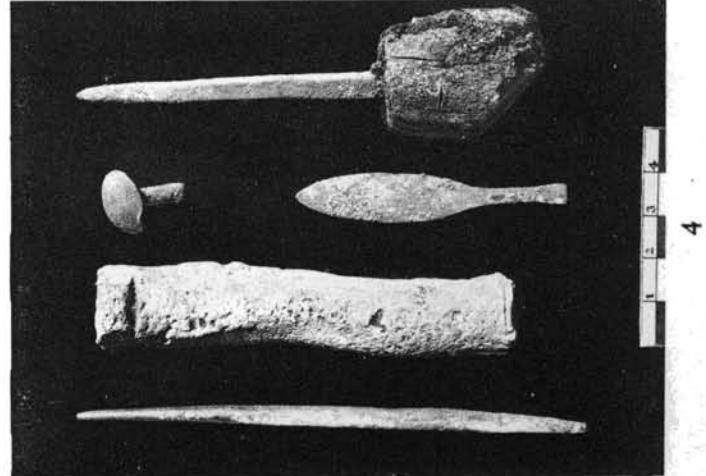
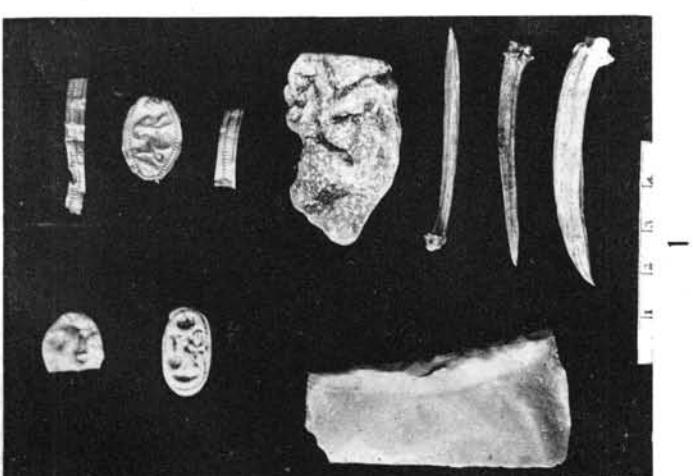
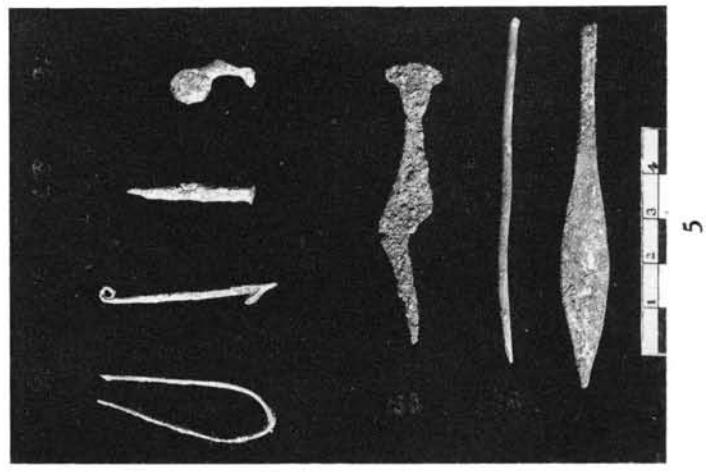
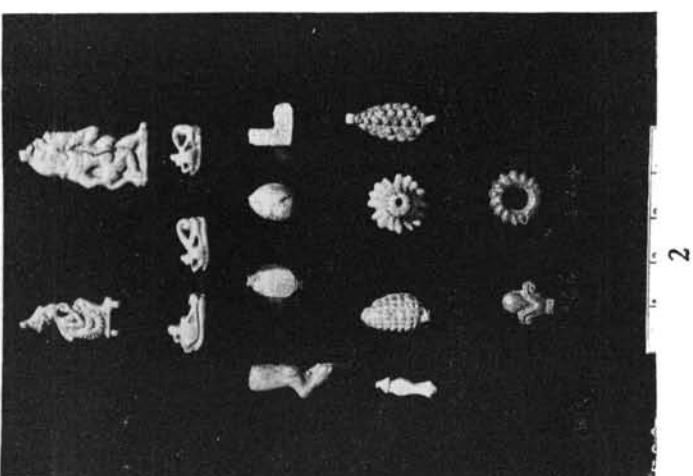
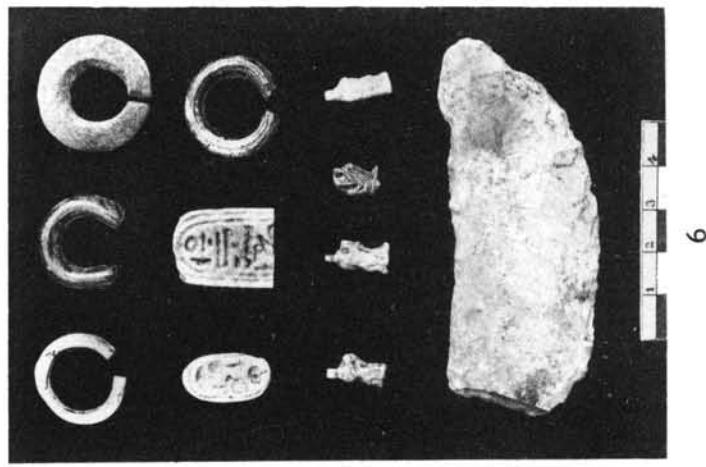
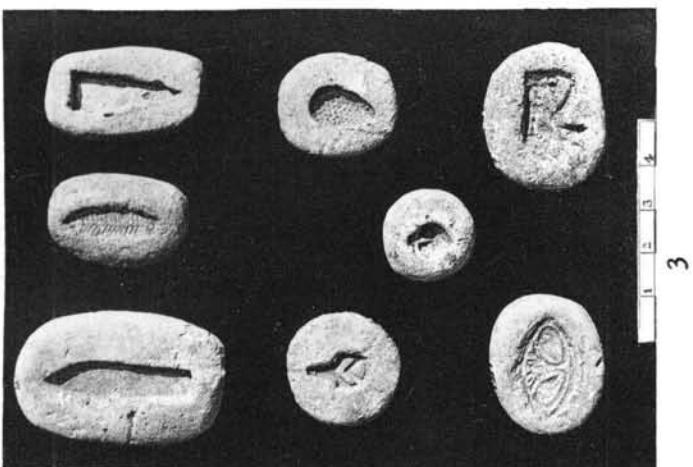


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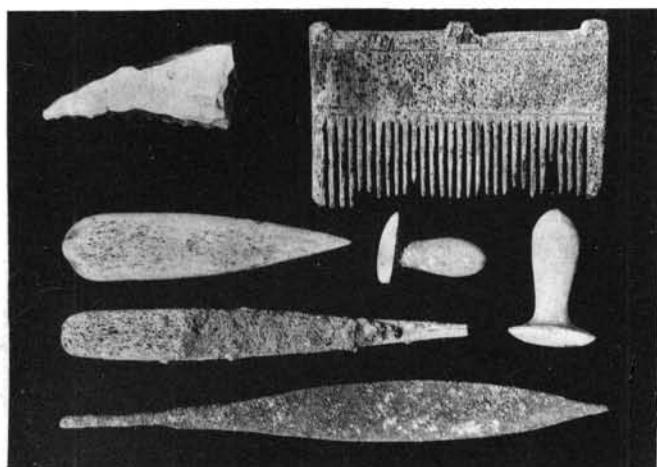


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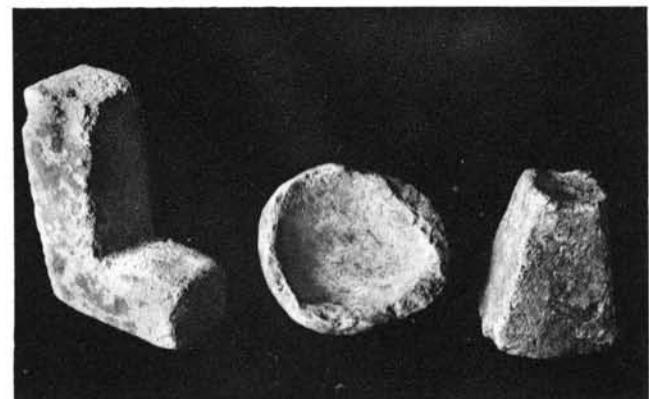
OBJECTS FROM THE MAIN CITY AND EASTERN VILLAGE



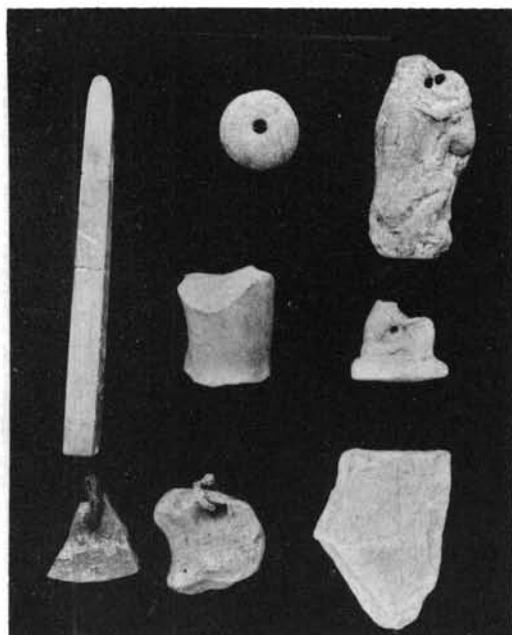
OBJECTS CHIEFLY FROM THE MAIN CITY  
The scale marks centimetres



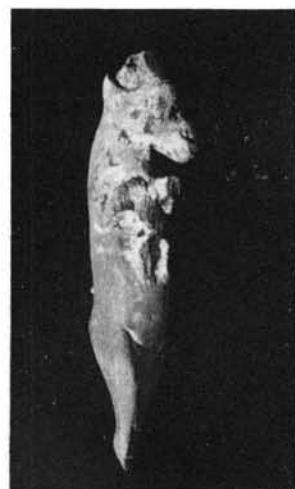
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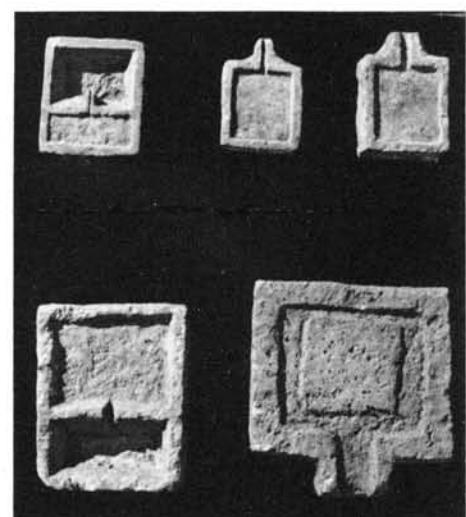
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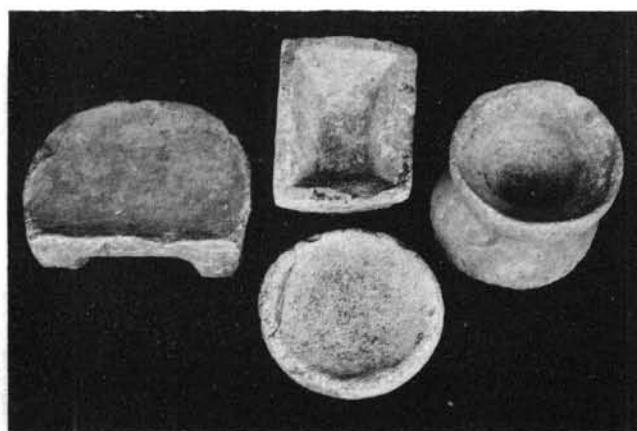
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4



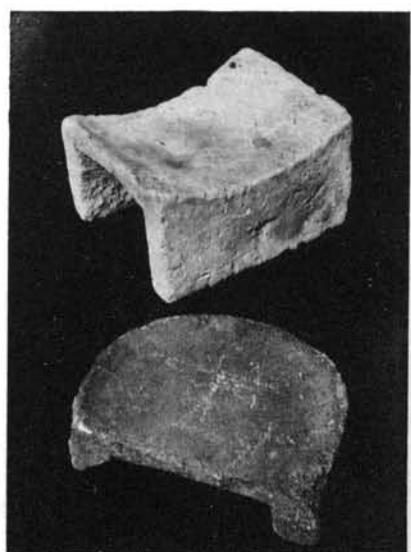
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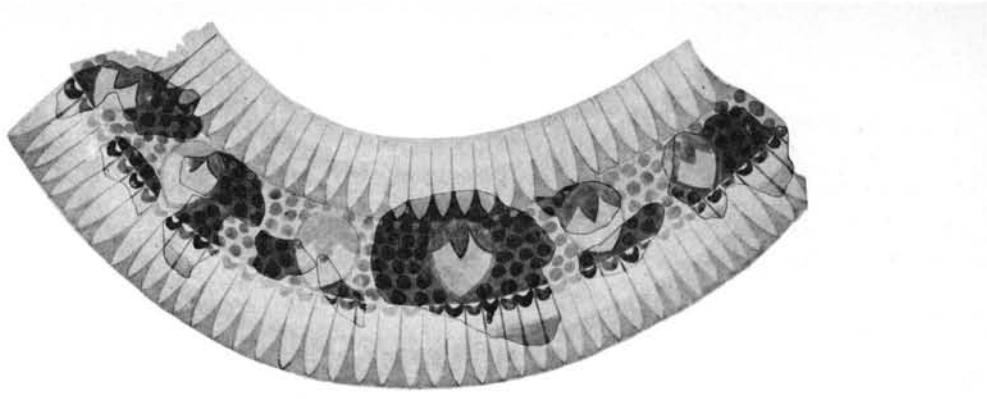
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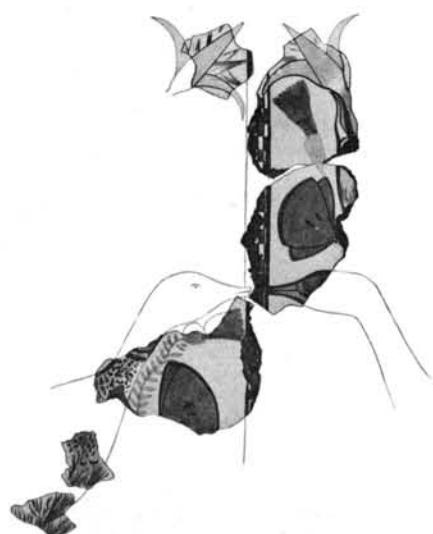
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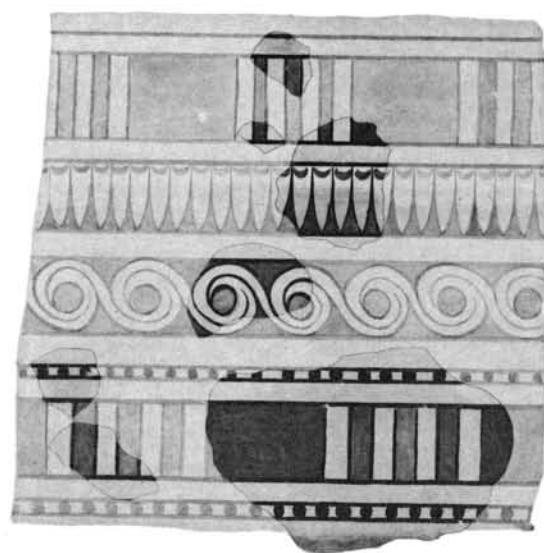
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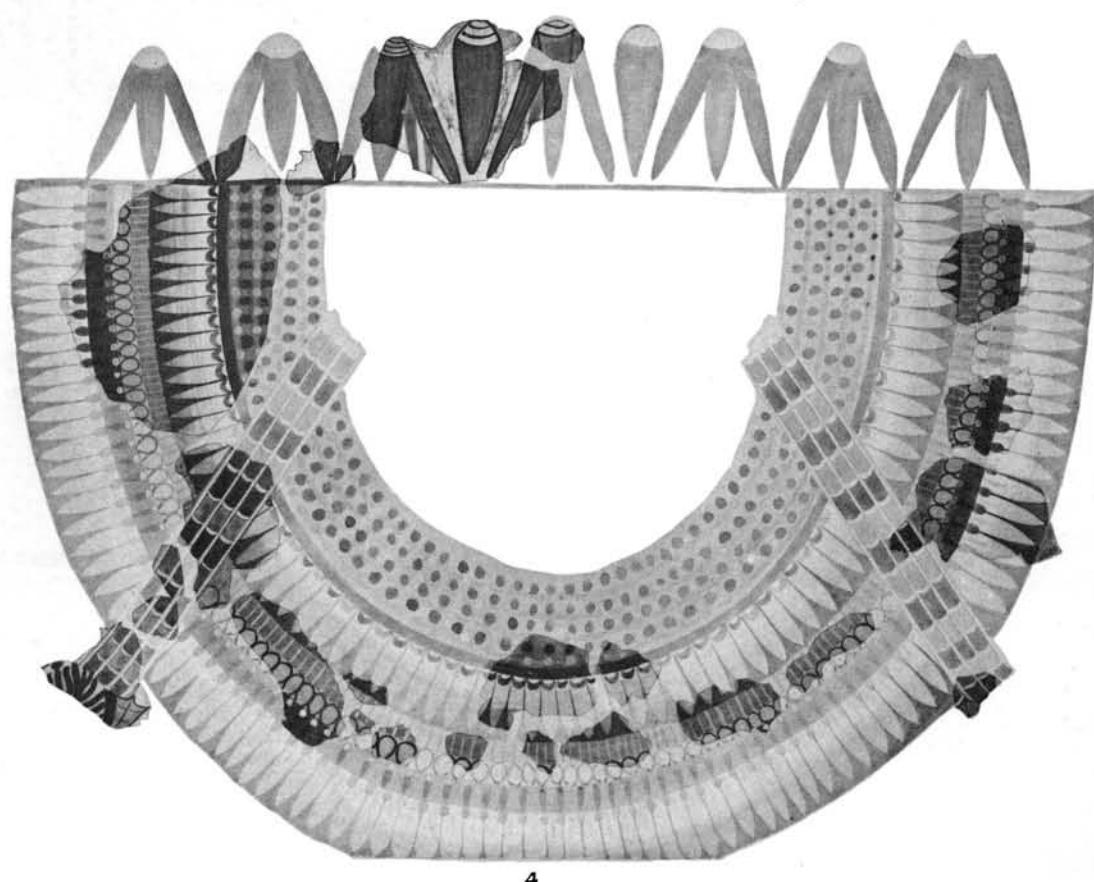
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2

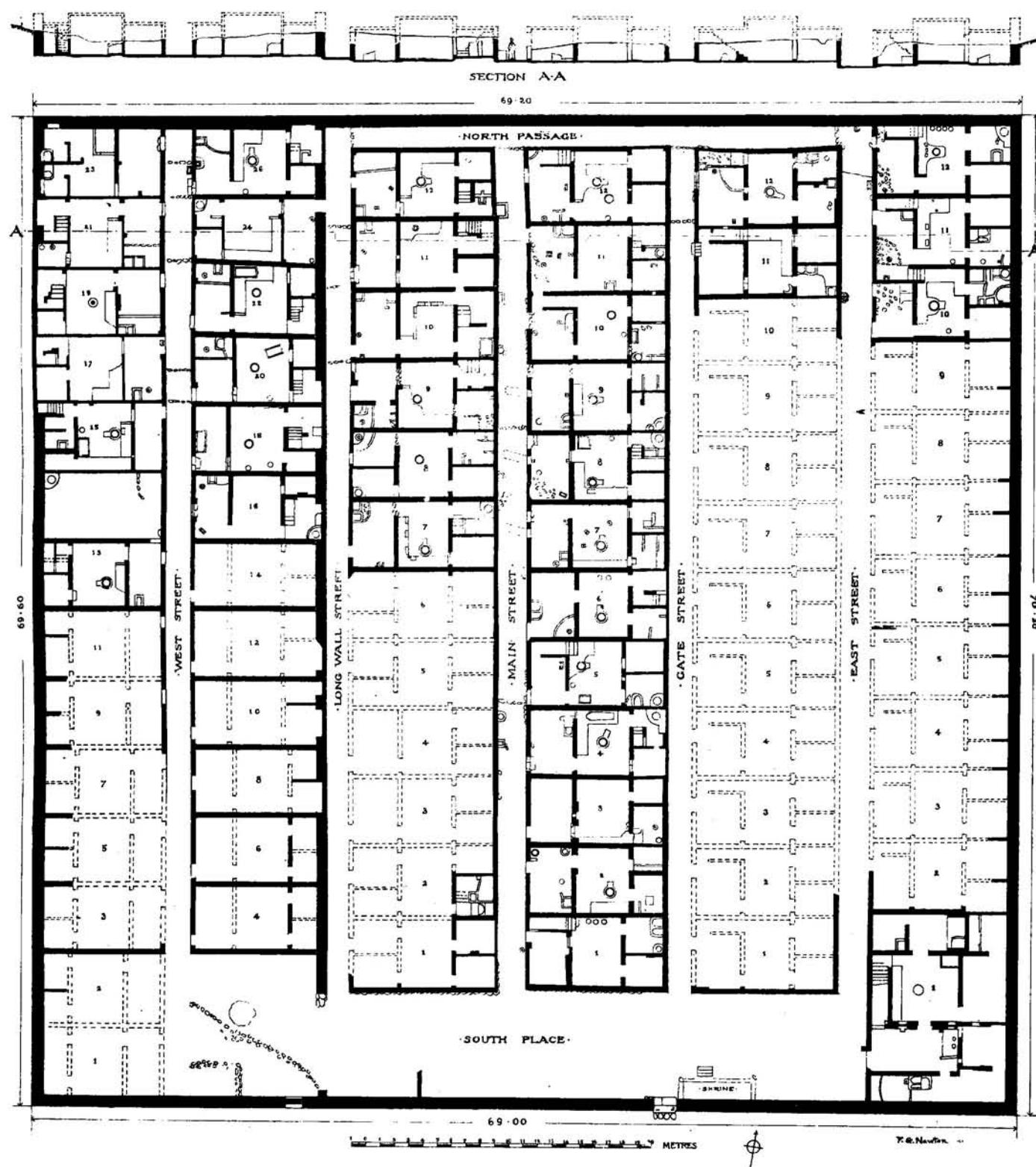


3



4

MAIN CITY, HOUSE N. 49. 18. PAINTED WALL-DECORATION  
Lighter tint marks restoration



PLAN OF THE EASTERN VILLAGE.



1



2



3



4



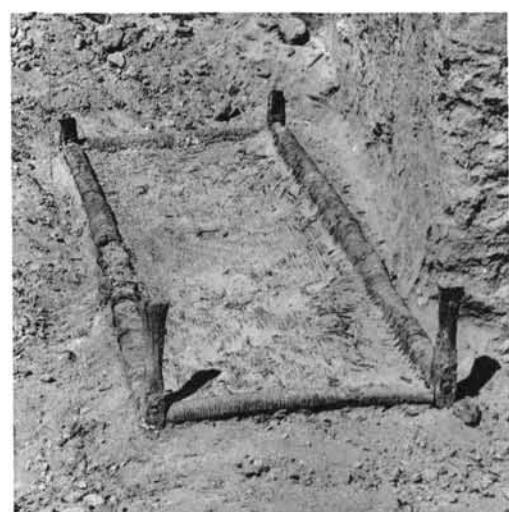
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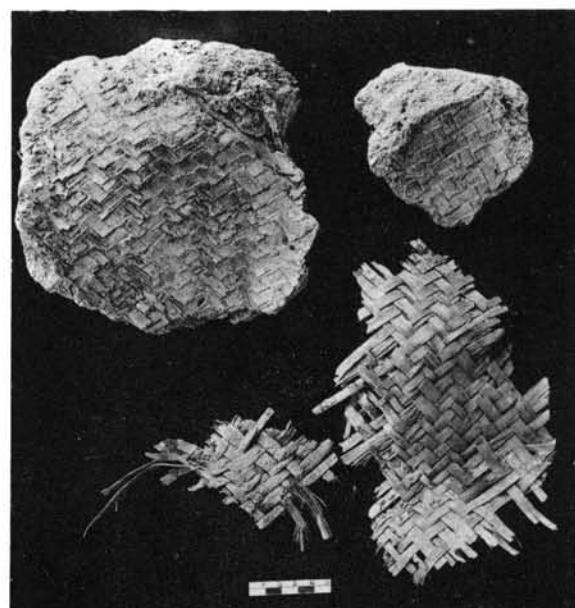
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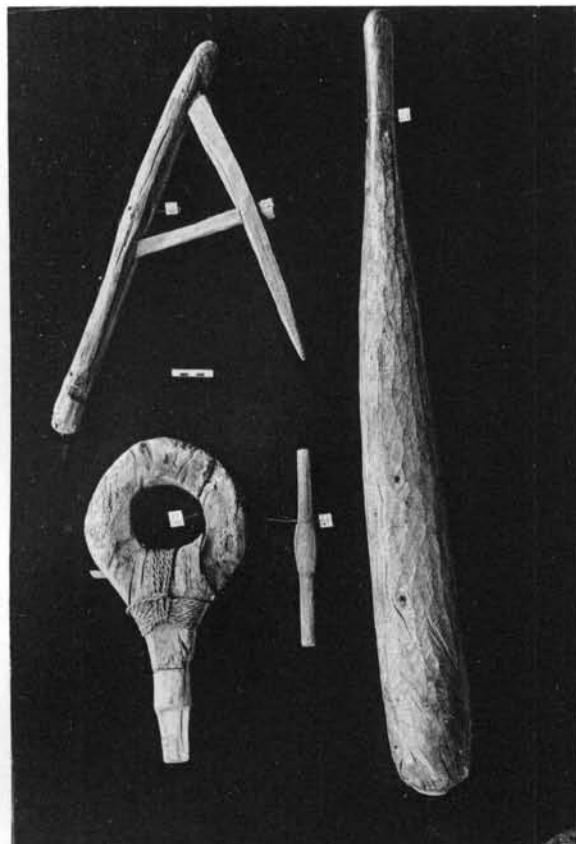
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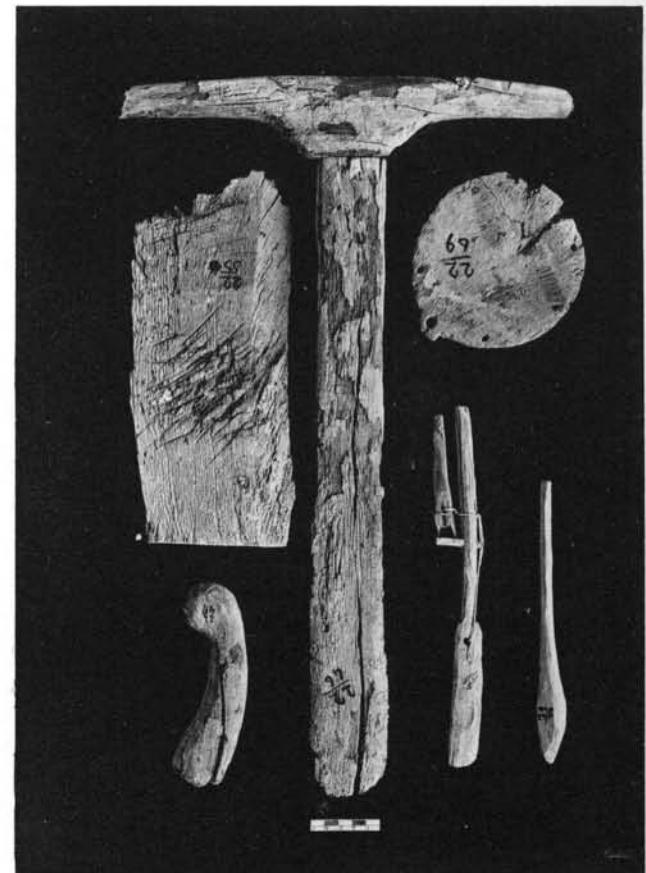
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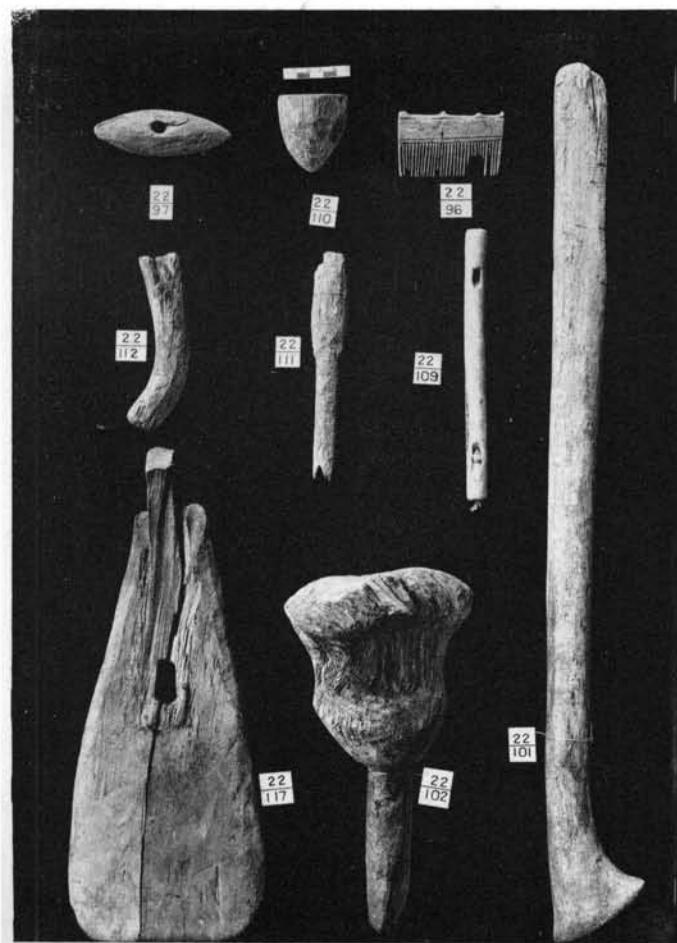
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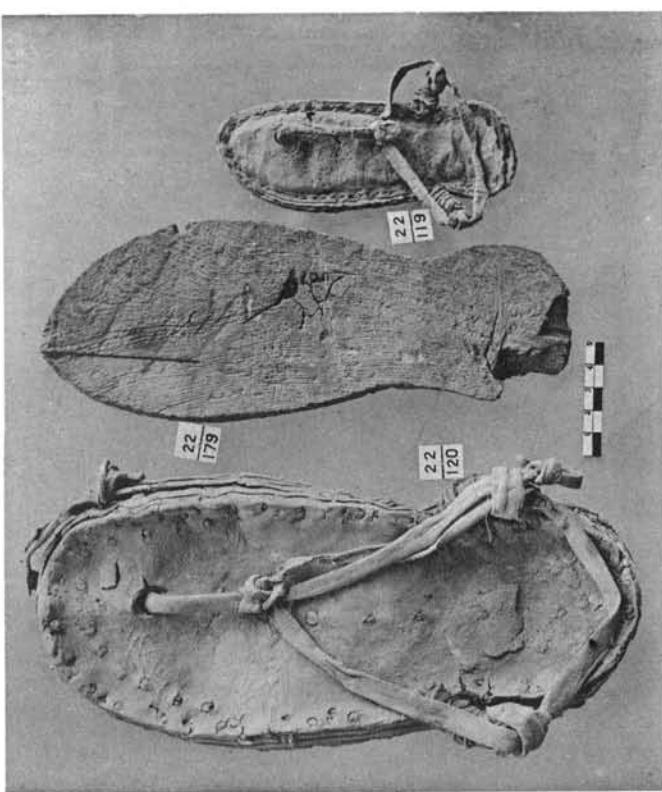


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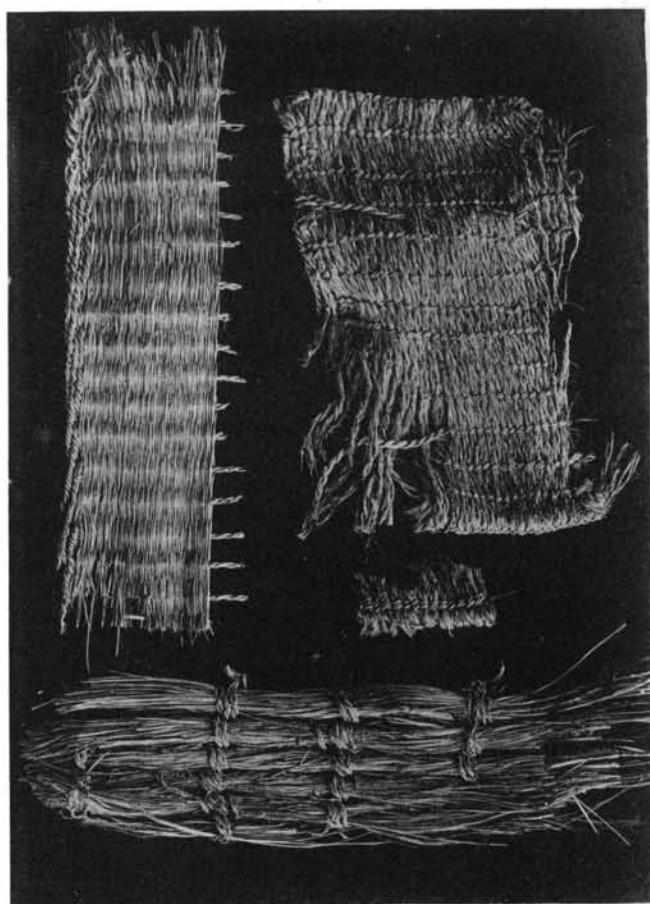


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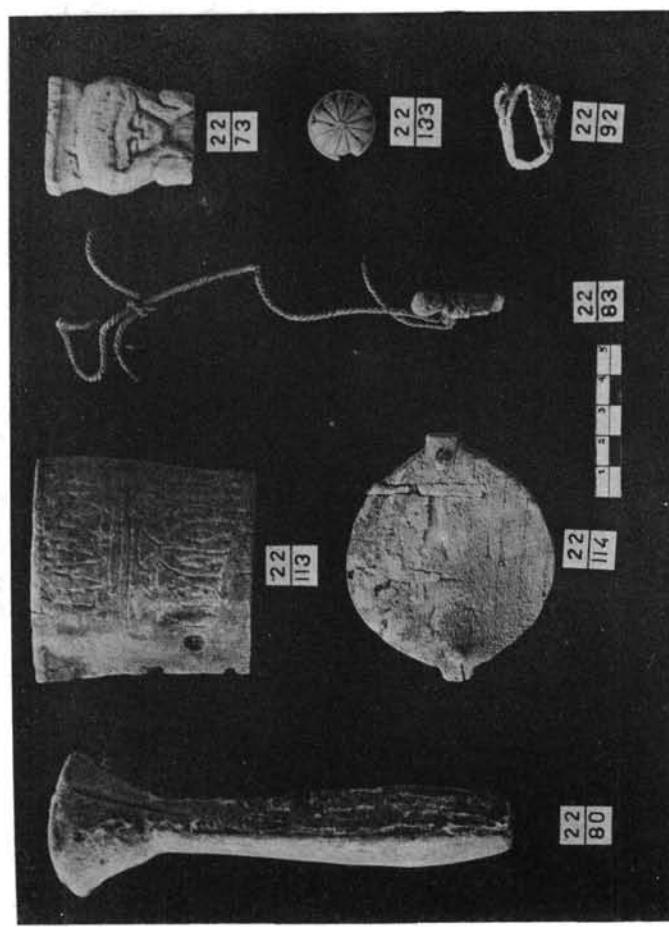
WOODEN OBJECTS FROM EASTERN VILLAGE  
The scale marks centimetres



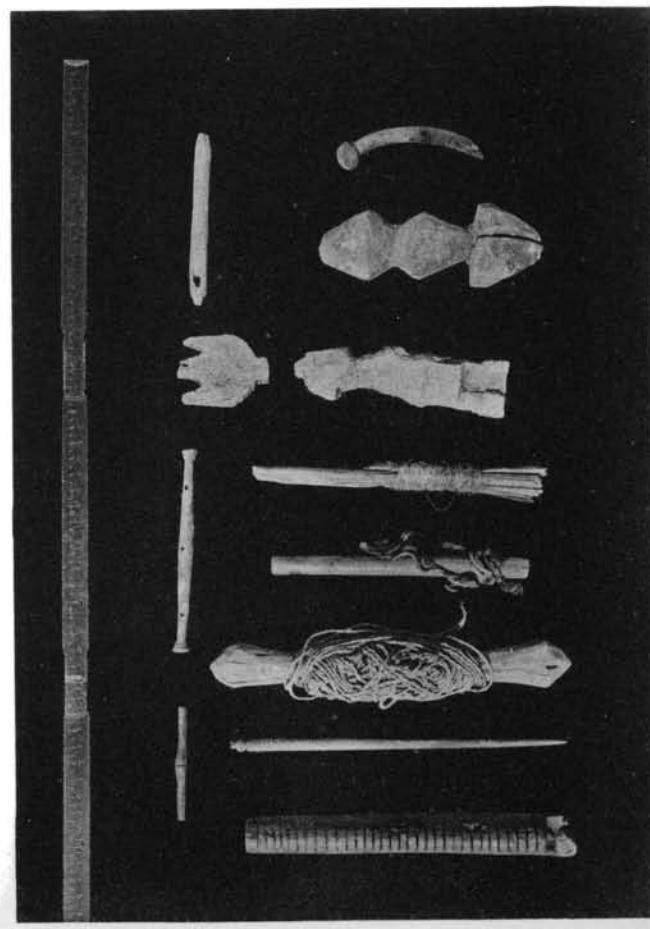
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4

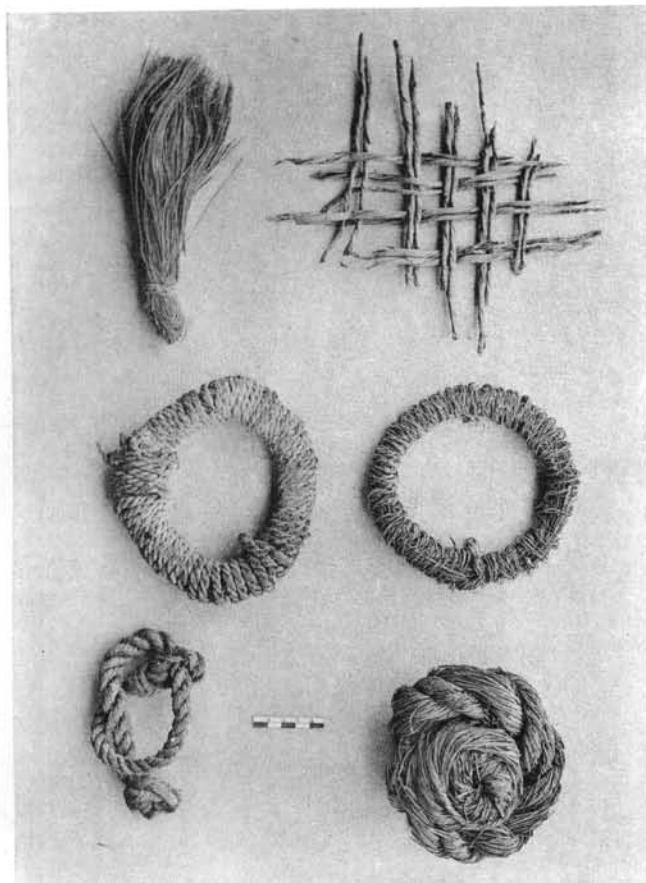


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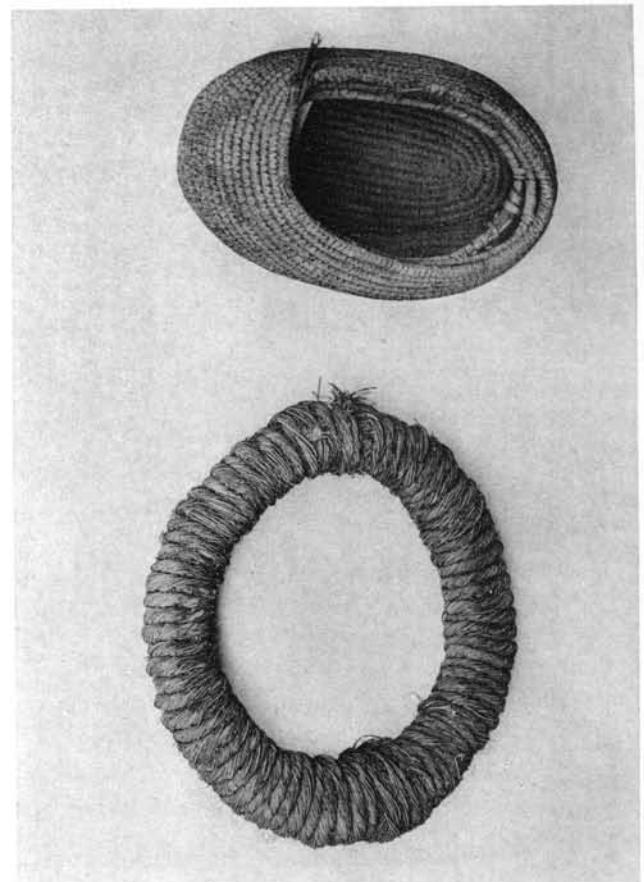


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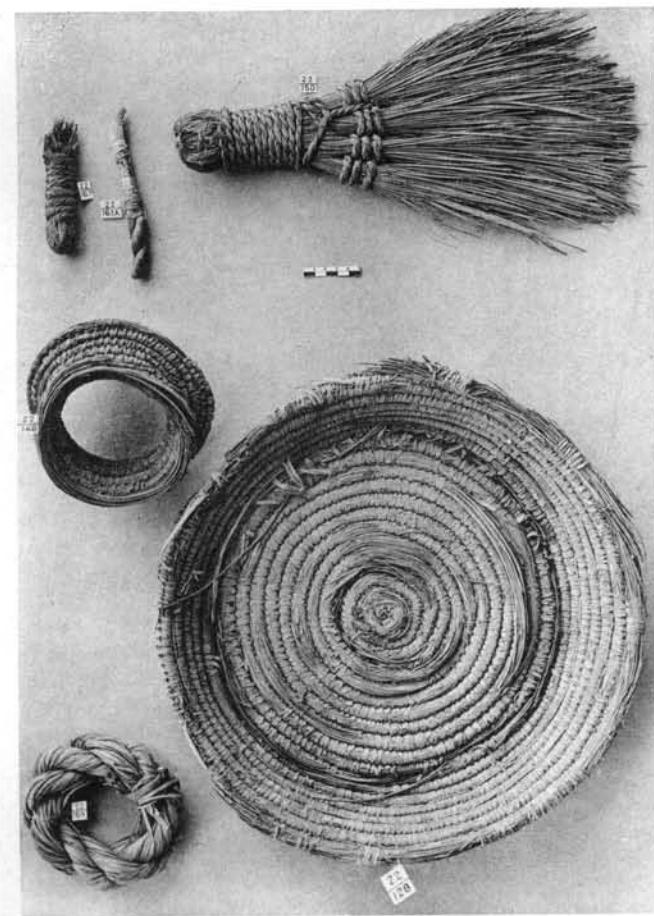
OBJECTS FROM EASTERN VILLAGE  
The scale marks centimetres



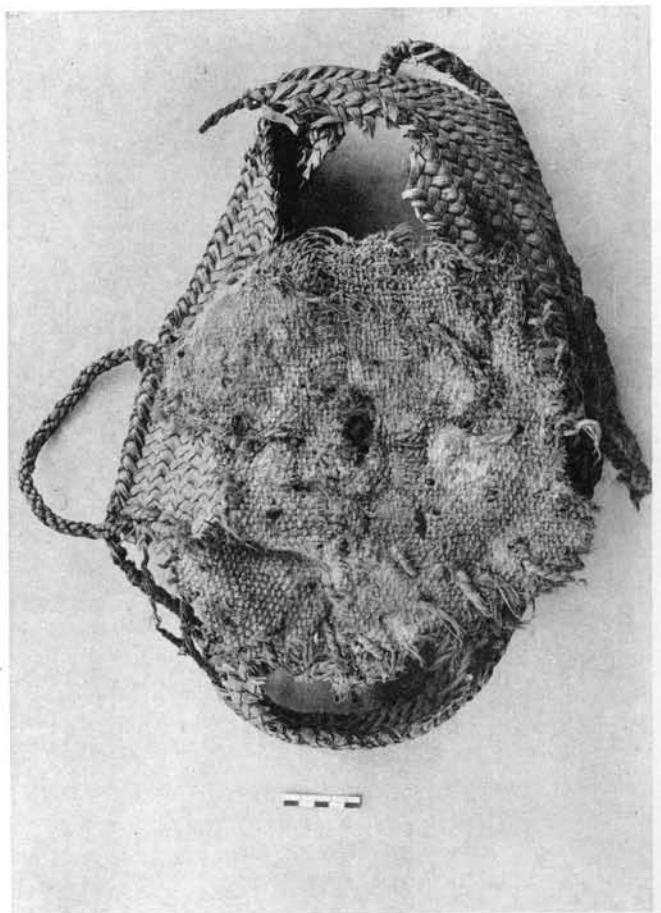
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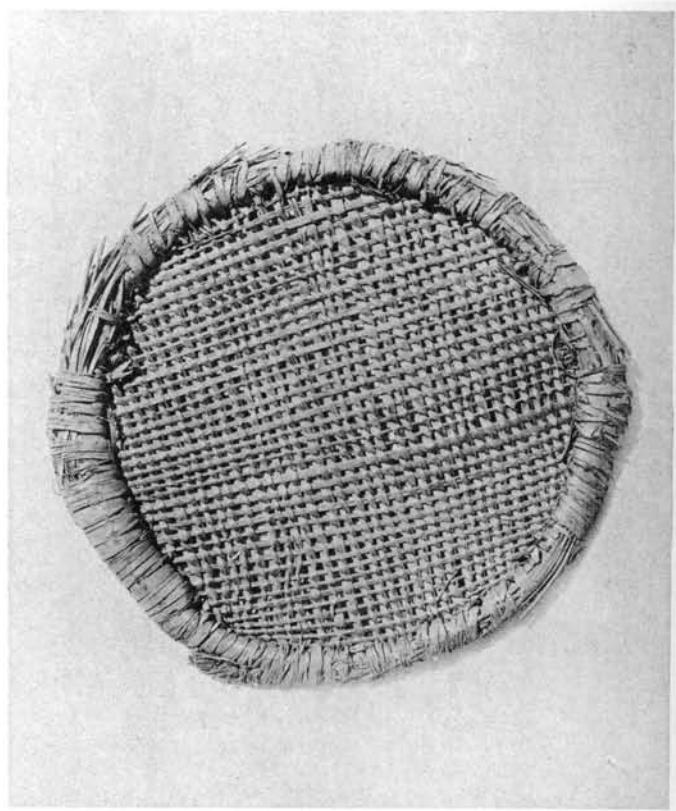


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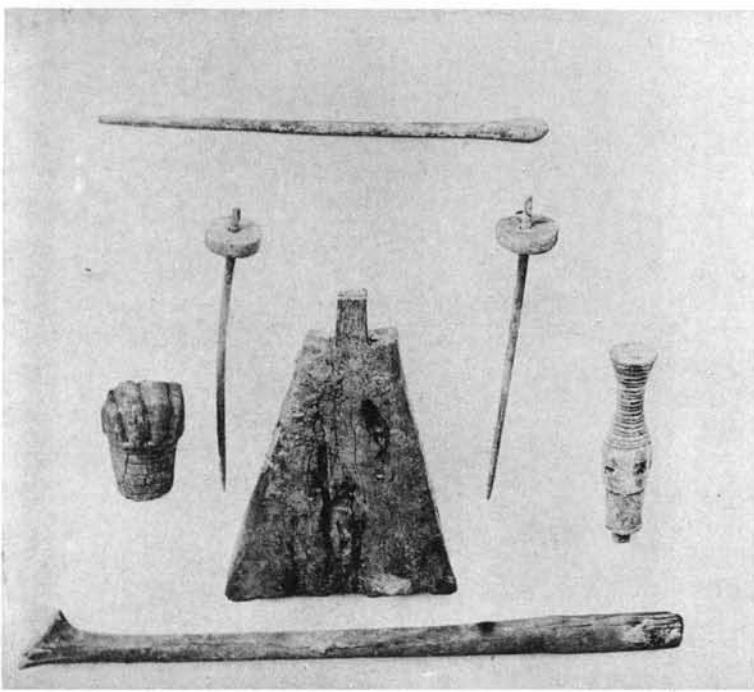
EASTERN VILLAGE. ROPE- AND BASKET-WORK  
The scale marks centimetres



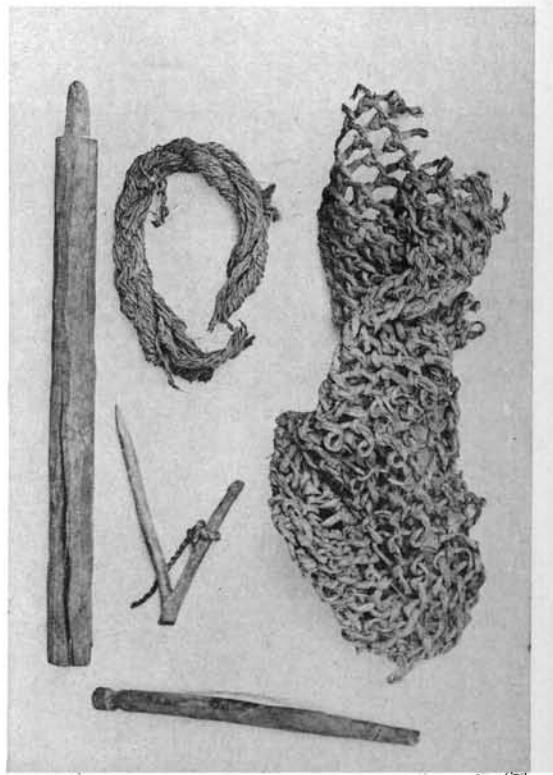
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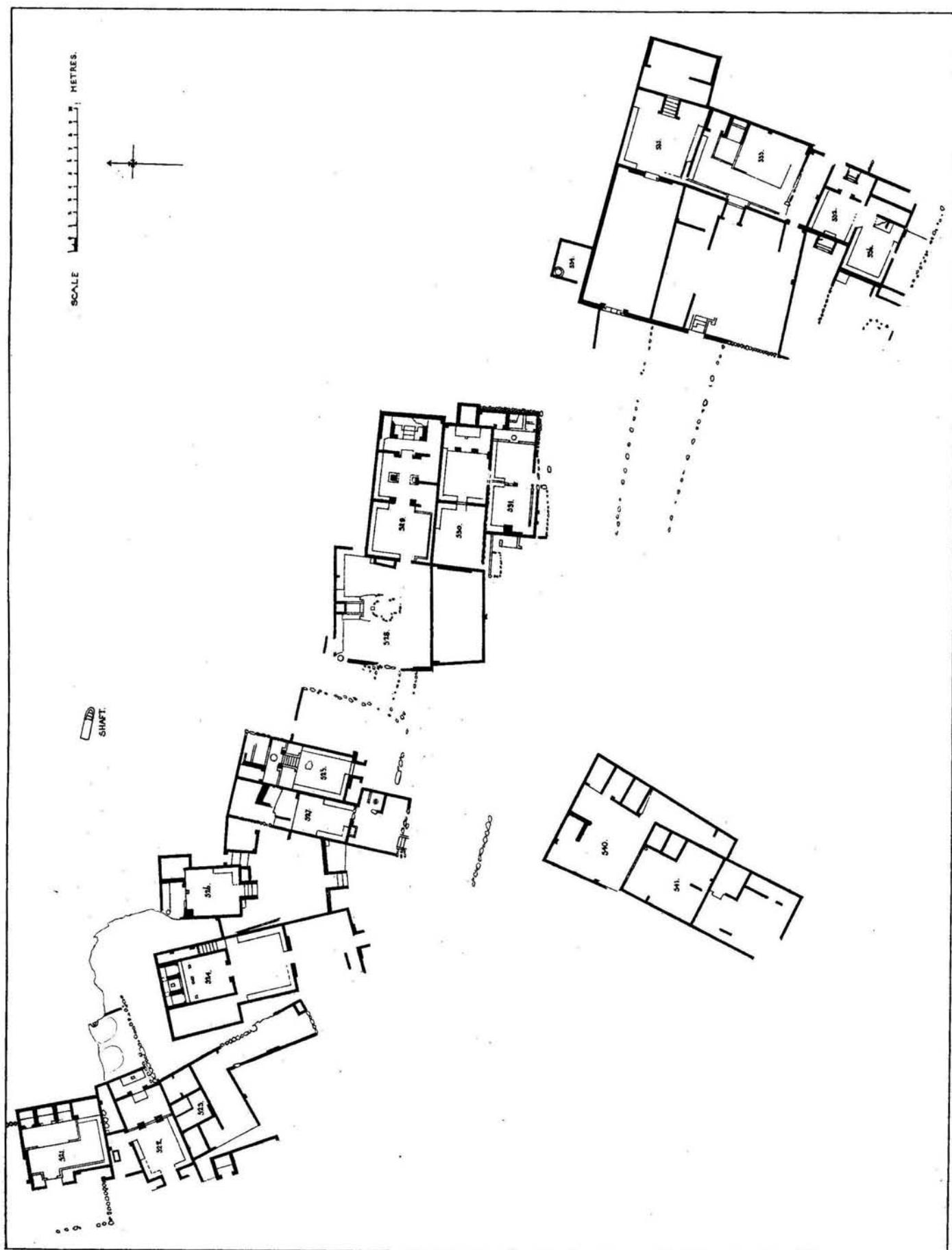


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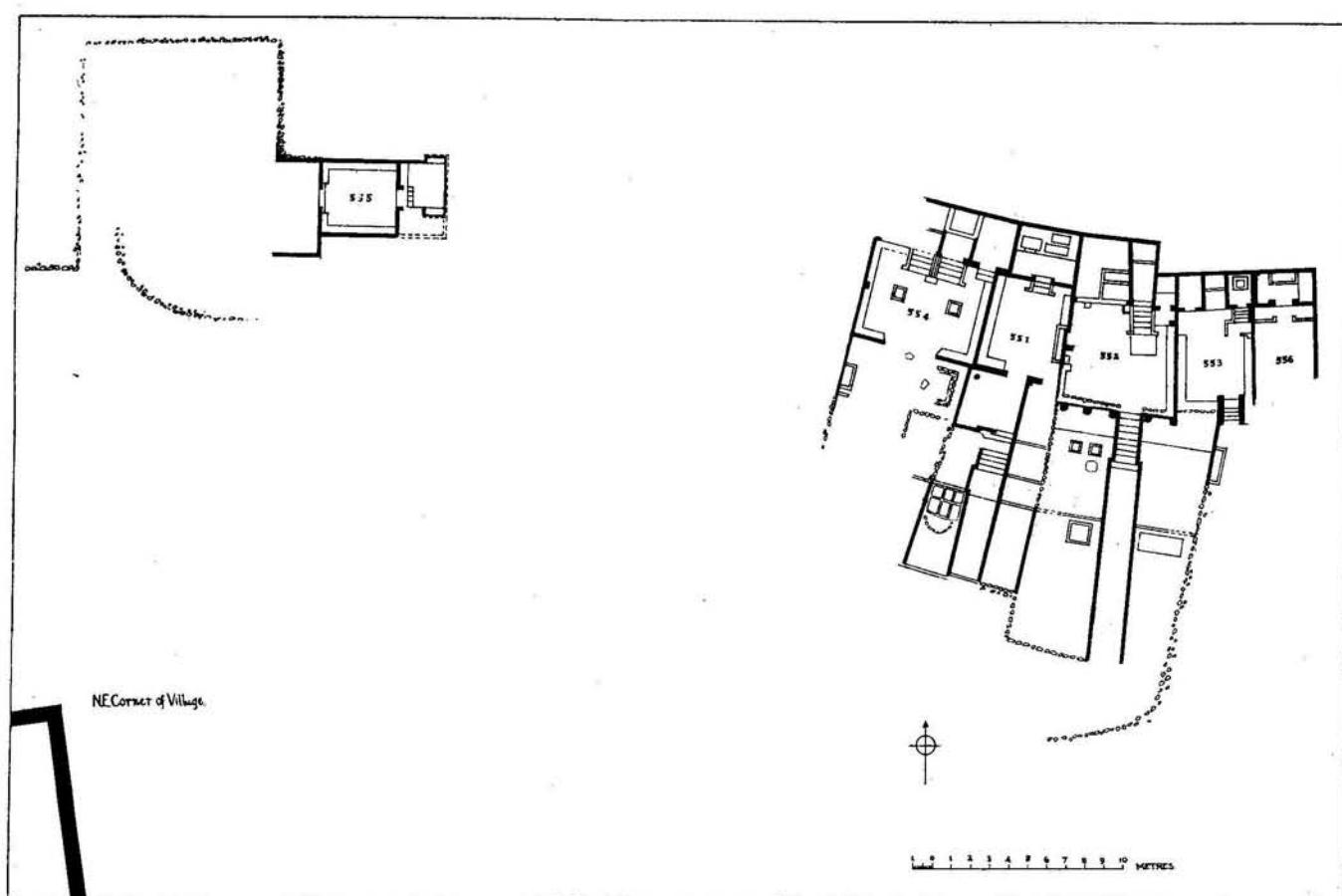
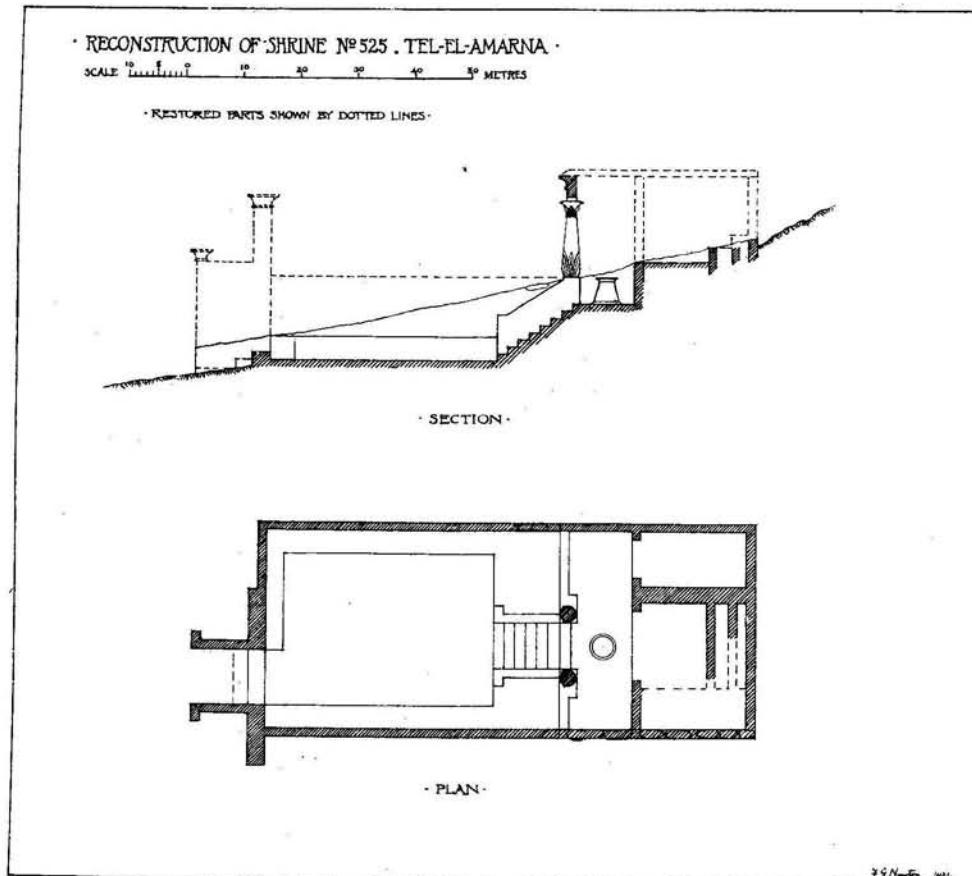


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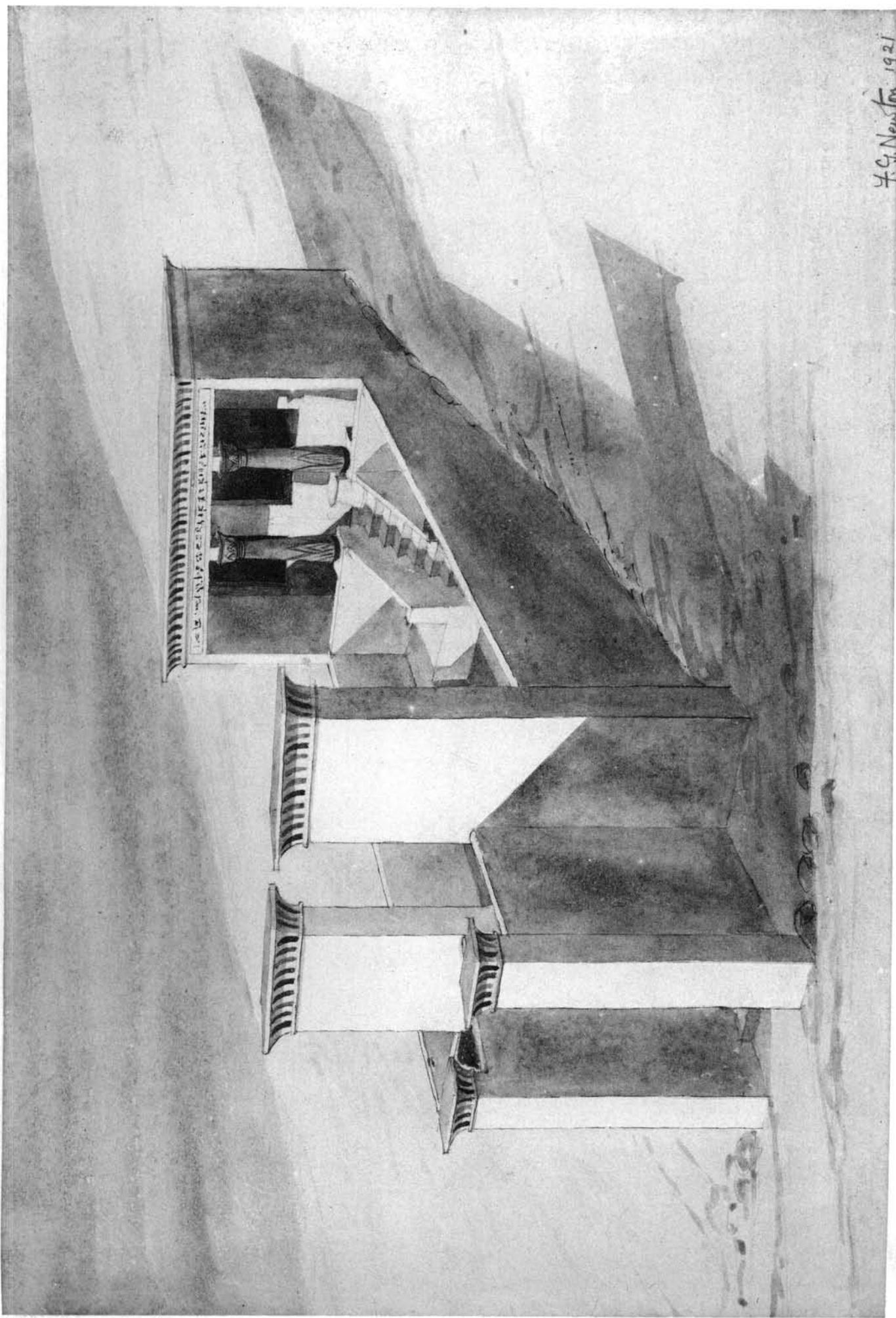
EASTERN VILLAGE. OBJECTS OF STONE AND POTTERY  
The scale marks centimetres



PLAN OF TOMB-CHAPELS 521-541.



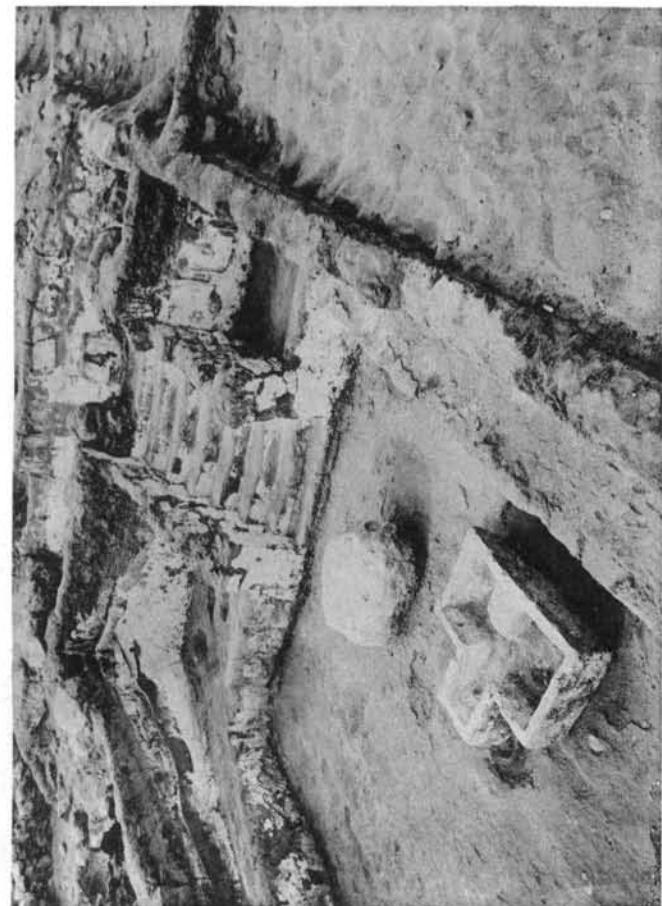
PLAN AND RESTORED SECTION OF TOMB-CHAPEL 525.  
PLANS OF TOMB-CHAPELS 551-556.



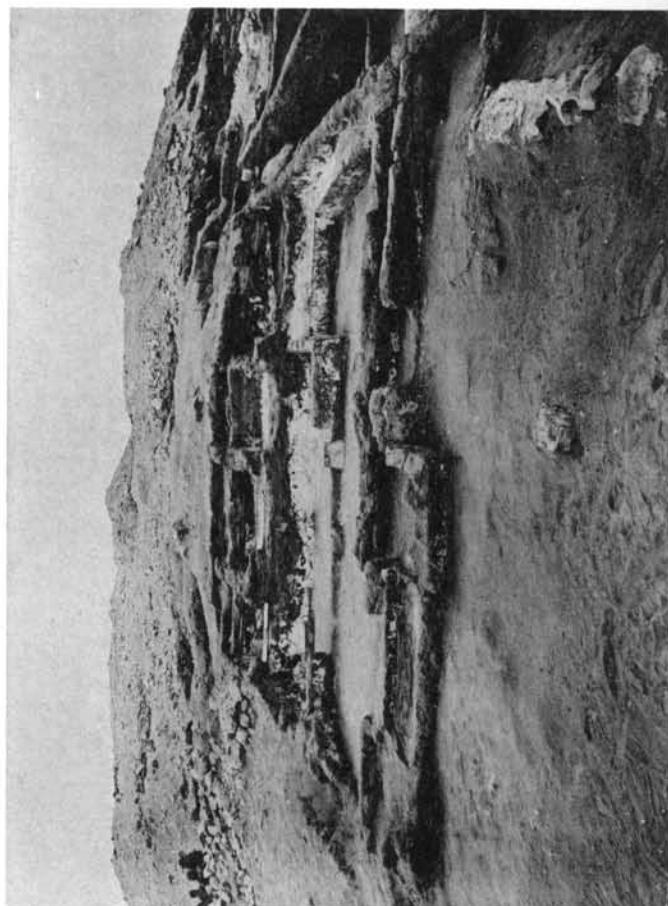
H. G. Newstead 1921

Plate XXVII.

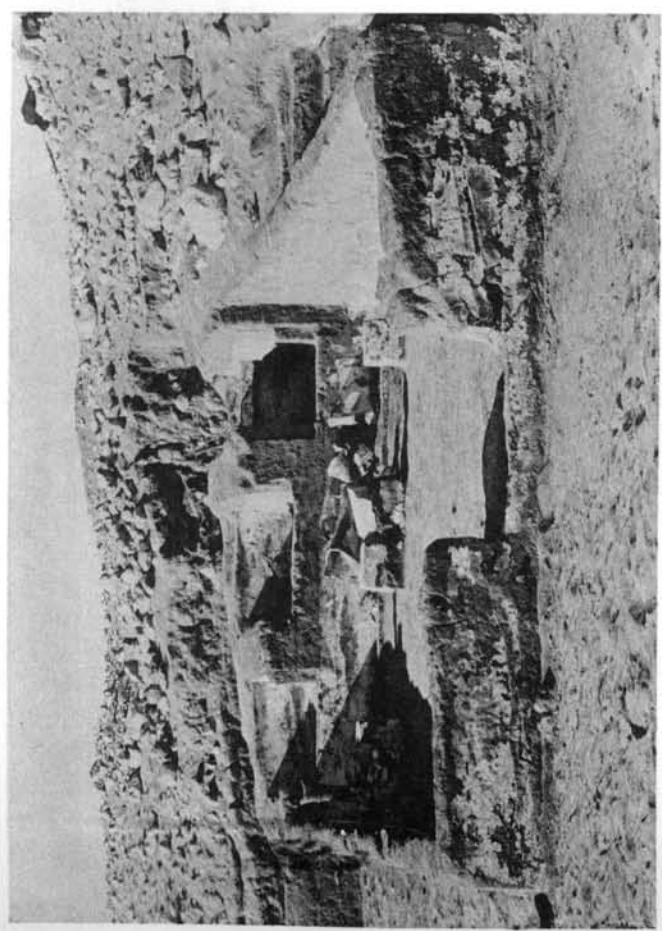
VIEWS OF TOMB-CHAPELS



2



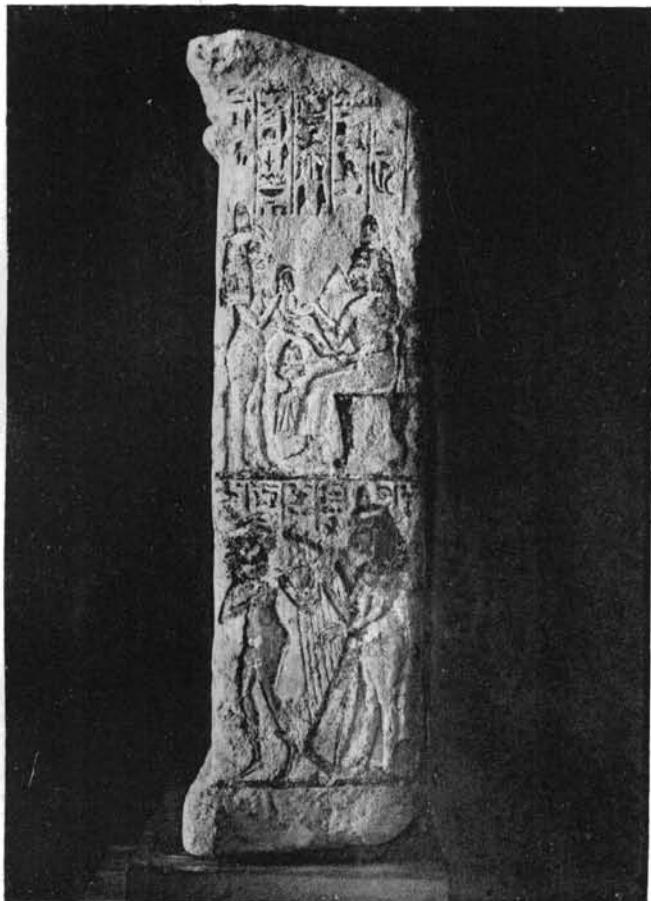
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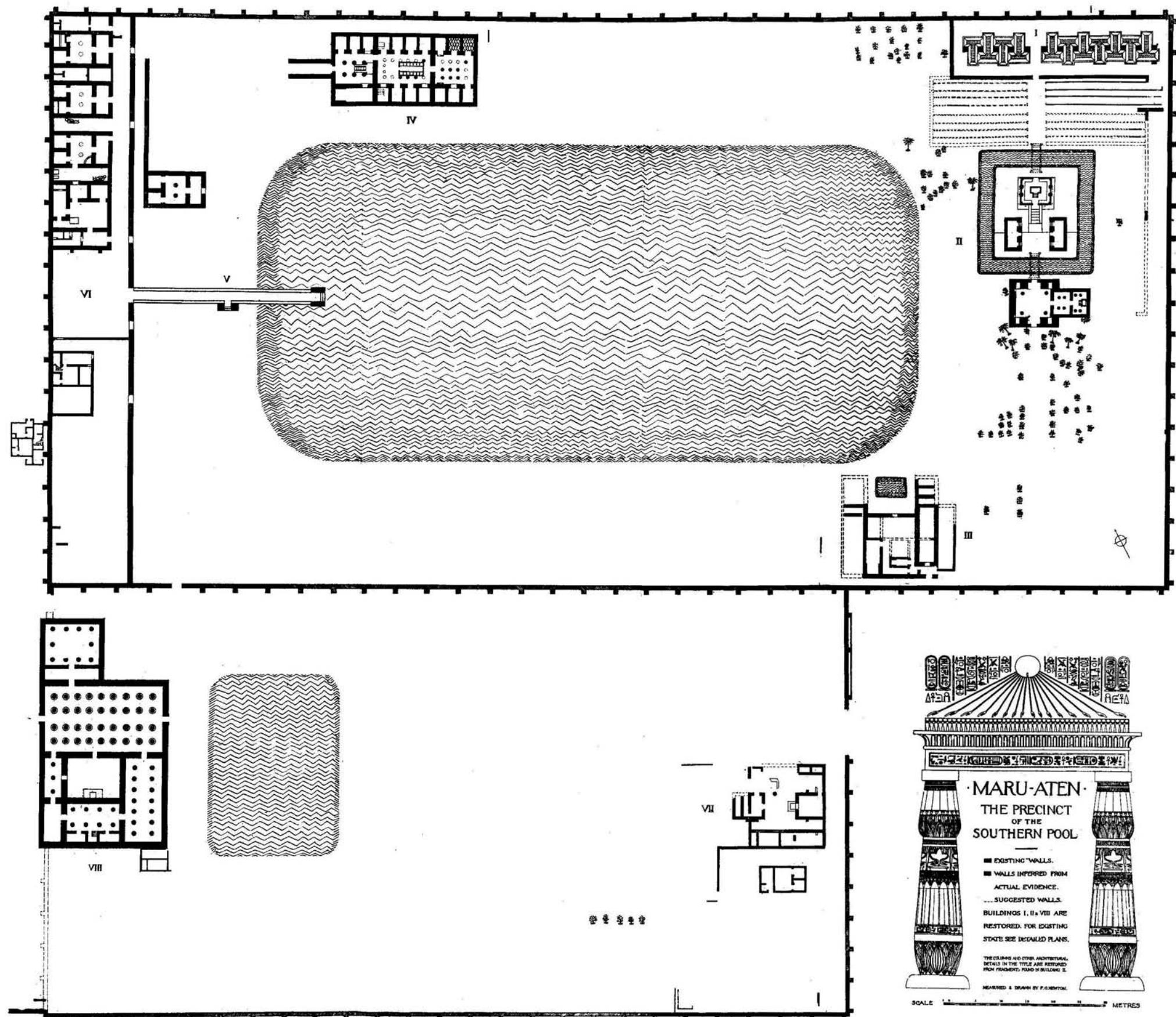
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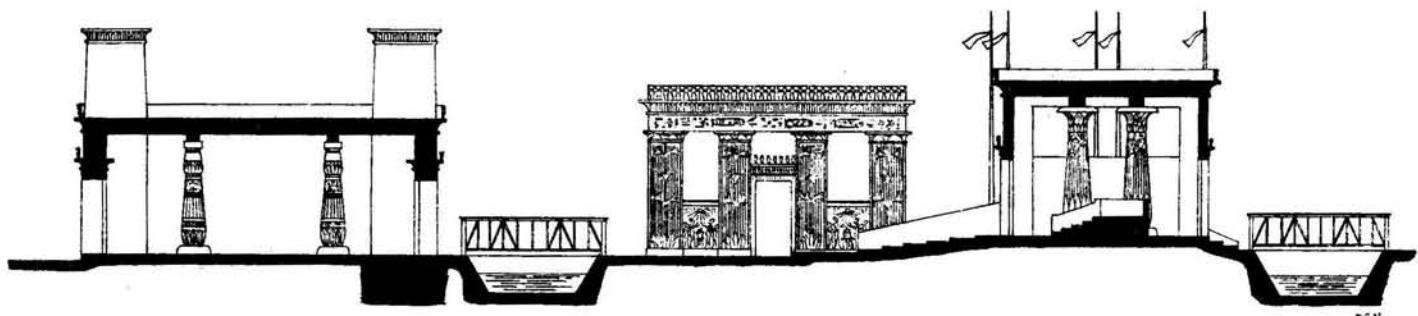
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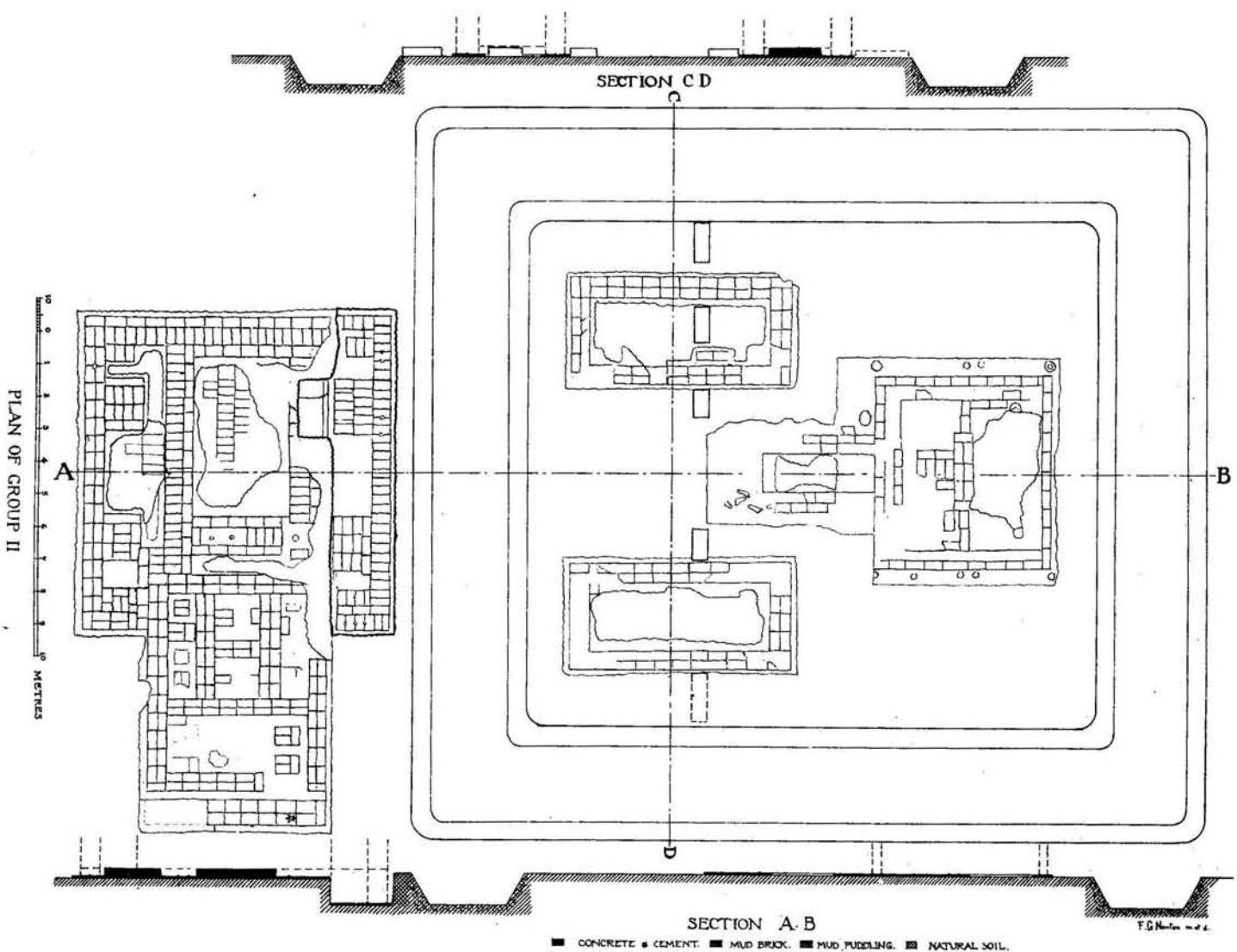


PLAN OF MARU-ATEN.



SUGGESTED RESTORATION OF GROUP II ON SECTION AB

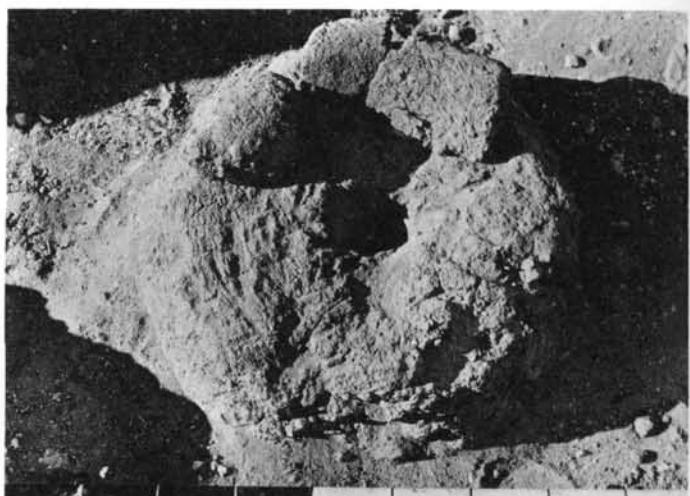
SCALE 1 0 5 10 METRES



MARU-ATEN II.



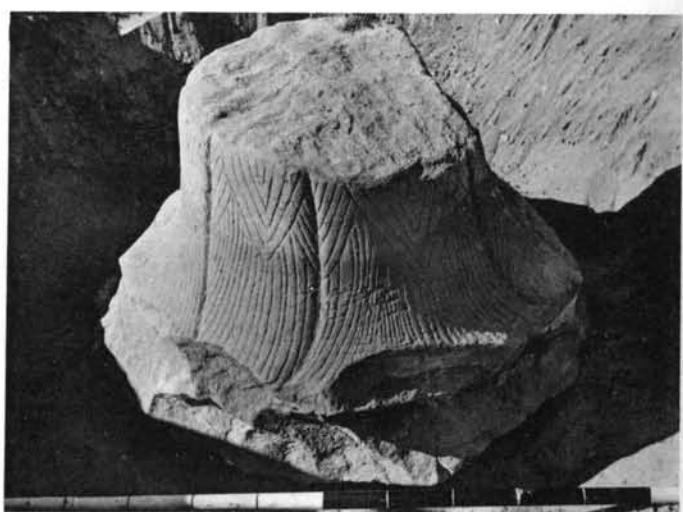
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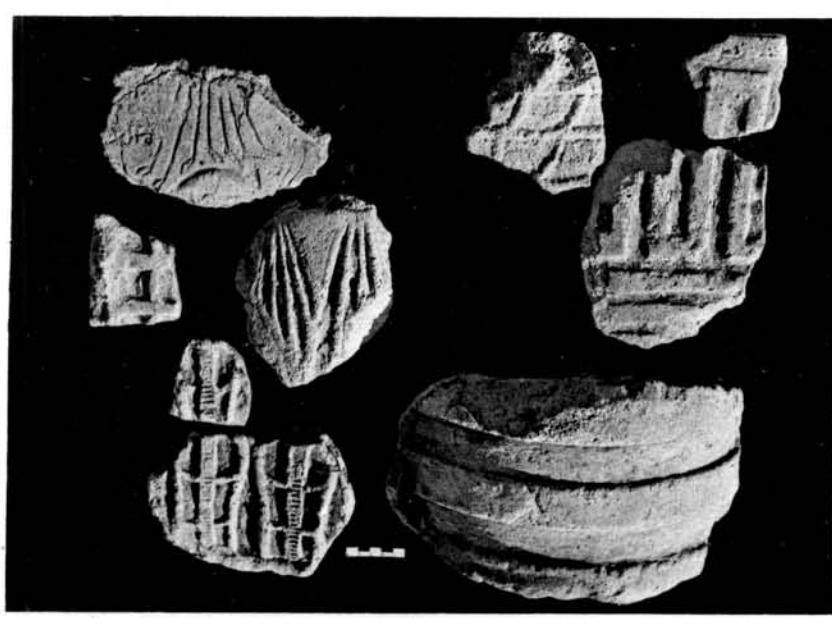
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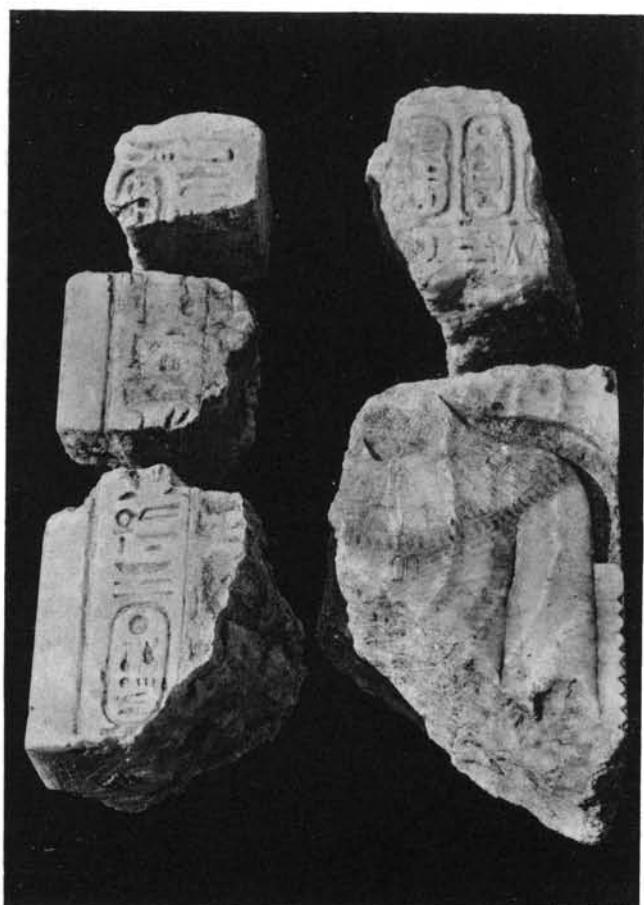
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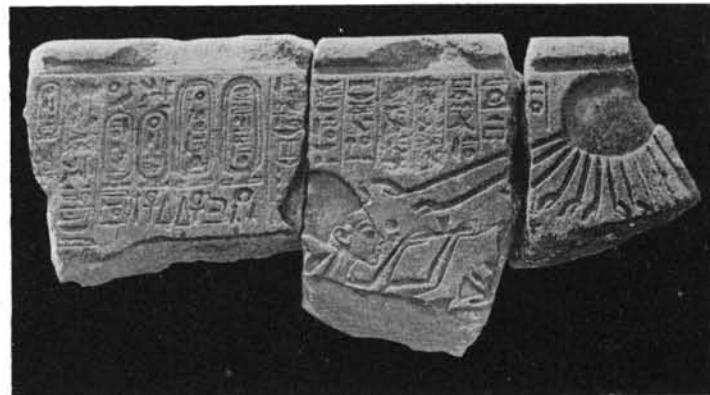
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SCULPTURED BLOCKS FROM MARU-ATEN (1-5) AND MAIN CITY (6)



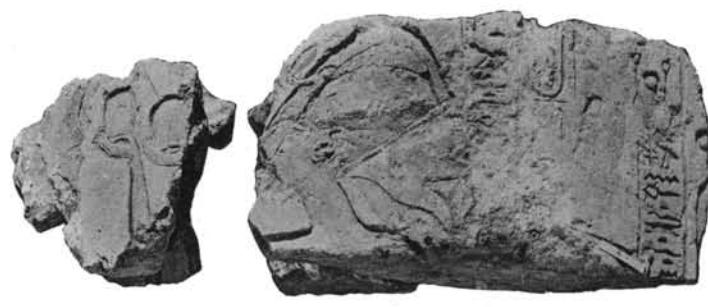
1



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6

INSCRIBED BLOCKS FROM MARU-ATEN  
The scale marks centimetres

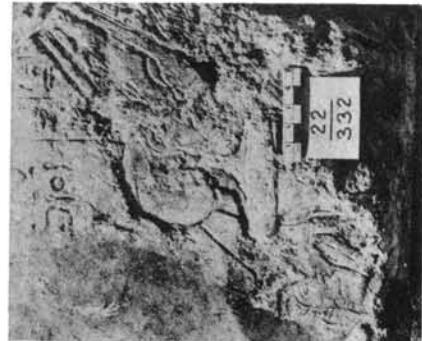
INSCRIBED AND SCULPTURED STONWORK FROM VARIOUS SOURCES  
The scale marks centimetres



3



7



11



2



6



10



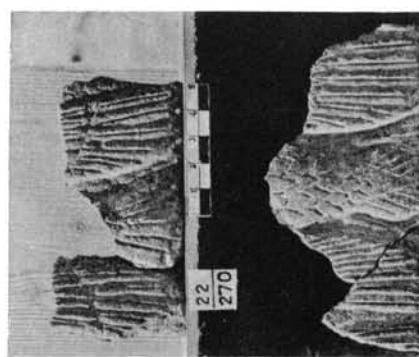
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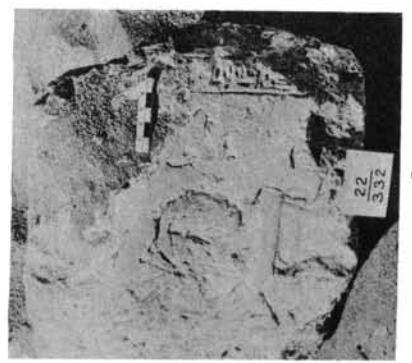
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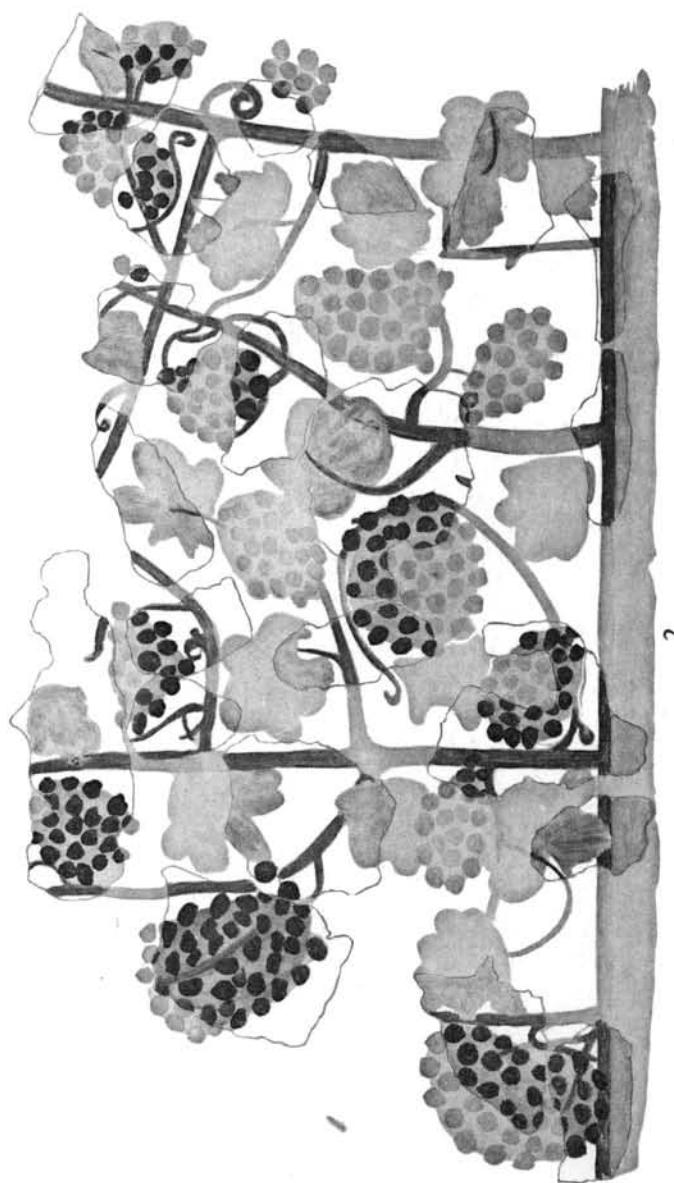
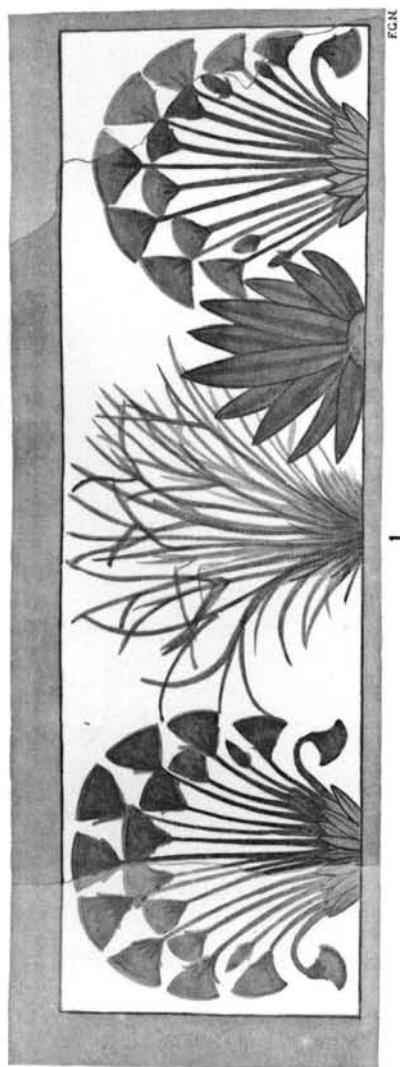
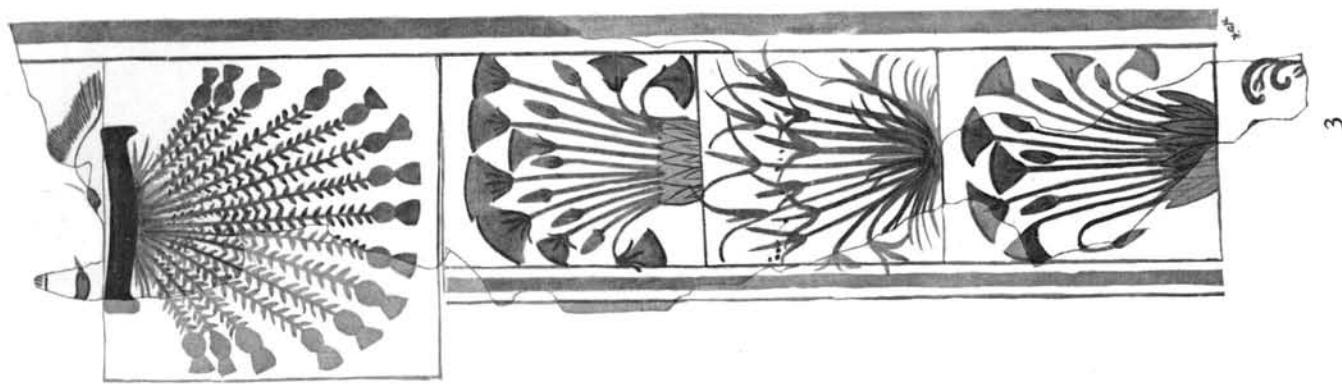
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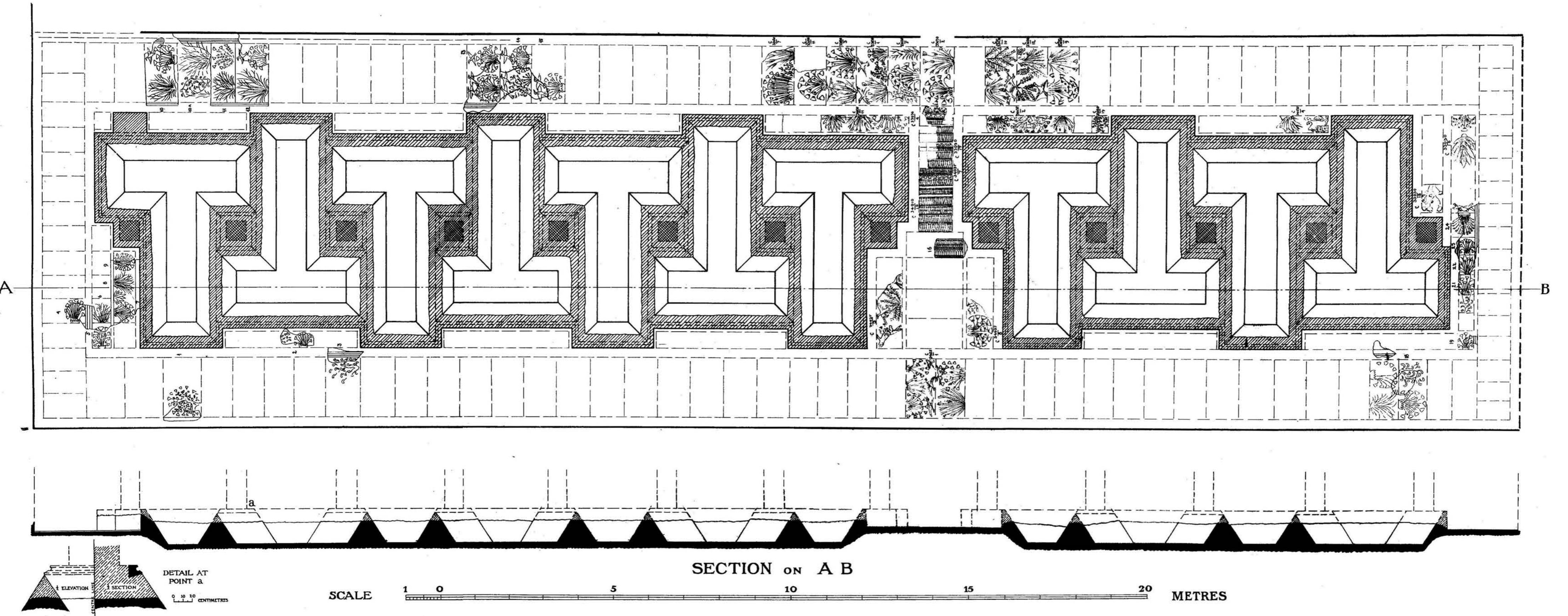
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8



Nos. 1 and 3. PAINTED PAVEMENT FROM MARU-ATEN I; Panels 7, 21-24. Scale  $\frac{1}{8}$   
No. 2. PAINTED VINE PATTERN FROM ROOF OF SHRINE IN TOMB-CHAPEL 51

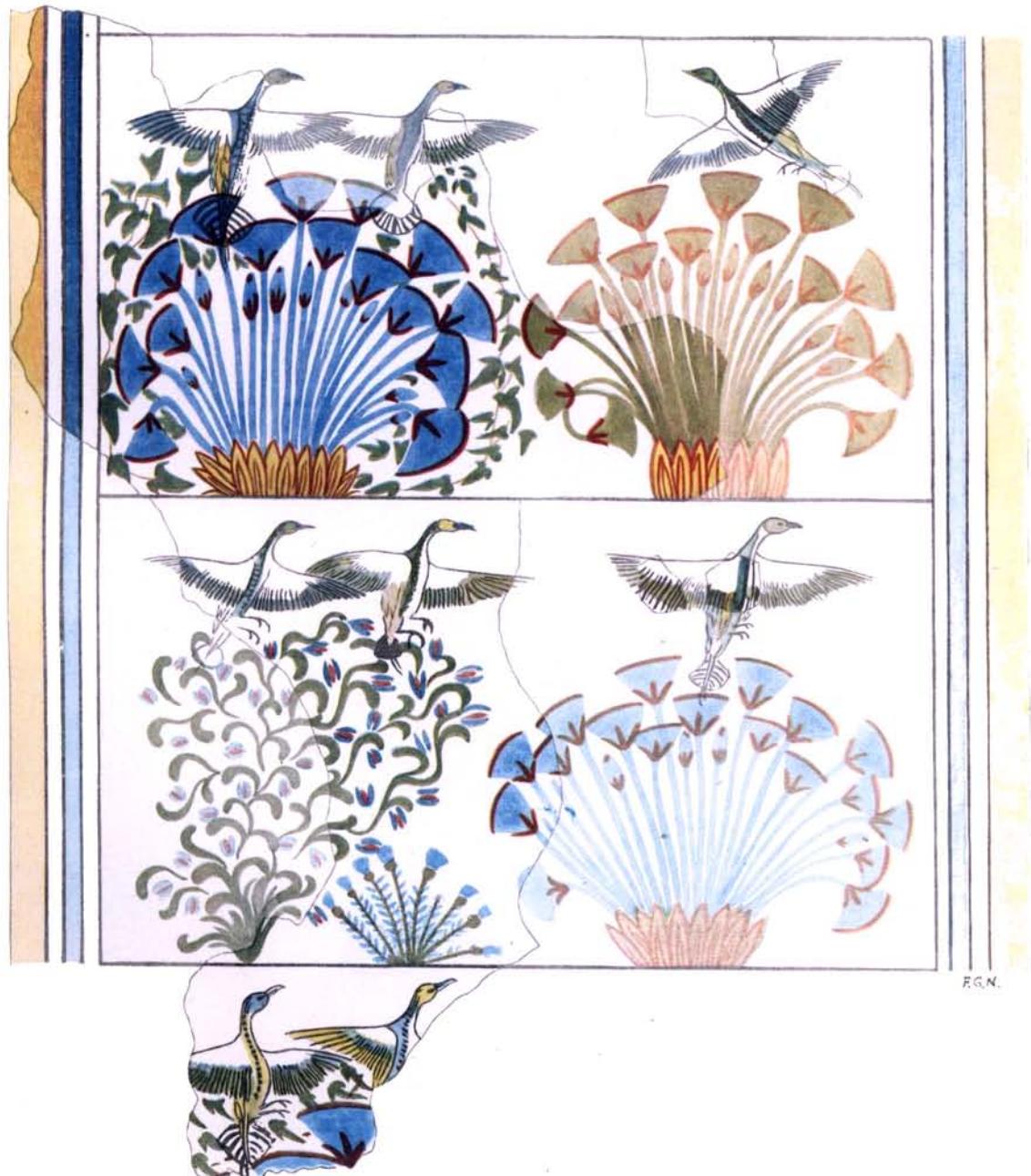


PLAN AND SECTION OF TANKS AND PAINTED PAVEMENT IN MARU-ATEN I.



PAINTED PAVEMENT FROM MARU-ATEN I

Panels 10, 10<sub>A</sub>, 11 and 12. Scale  $\frac{1}{5}$

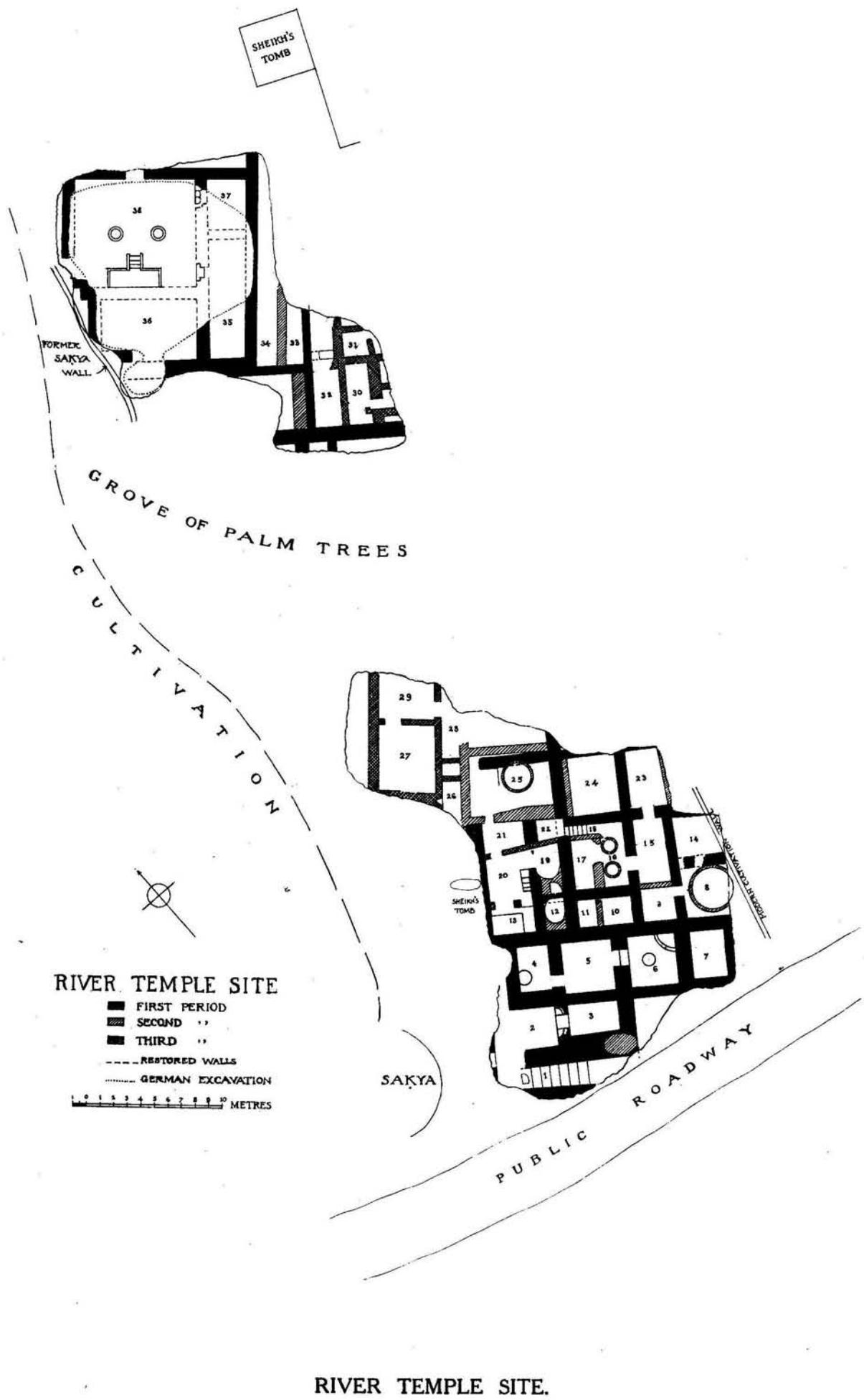


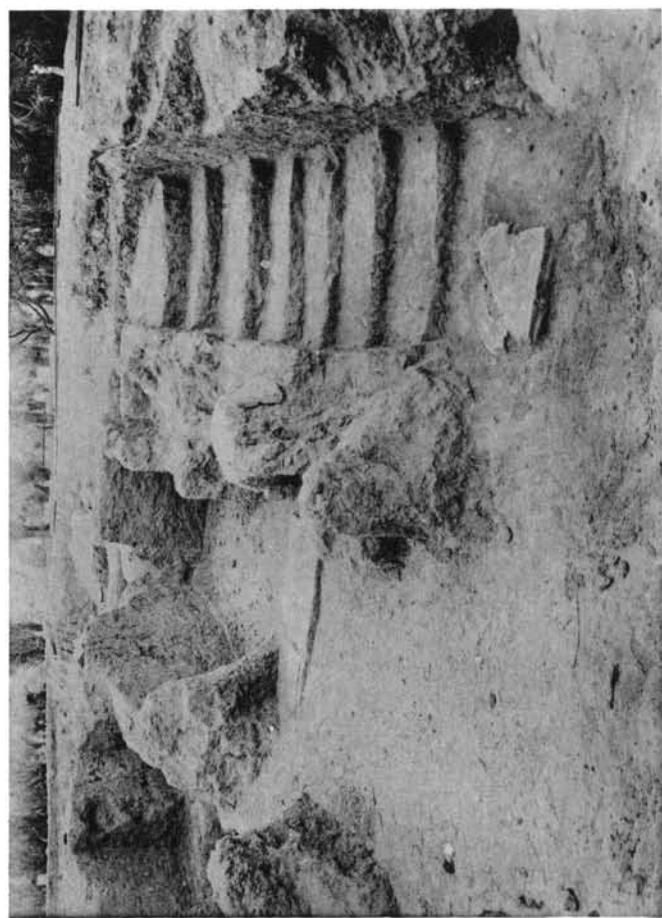
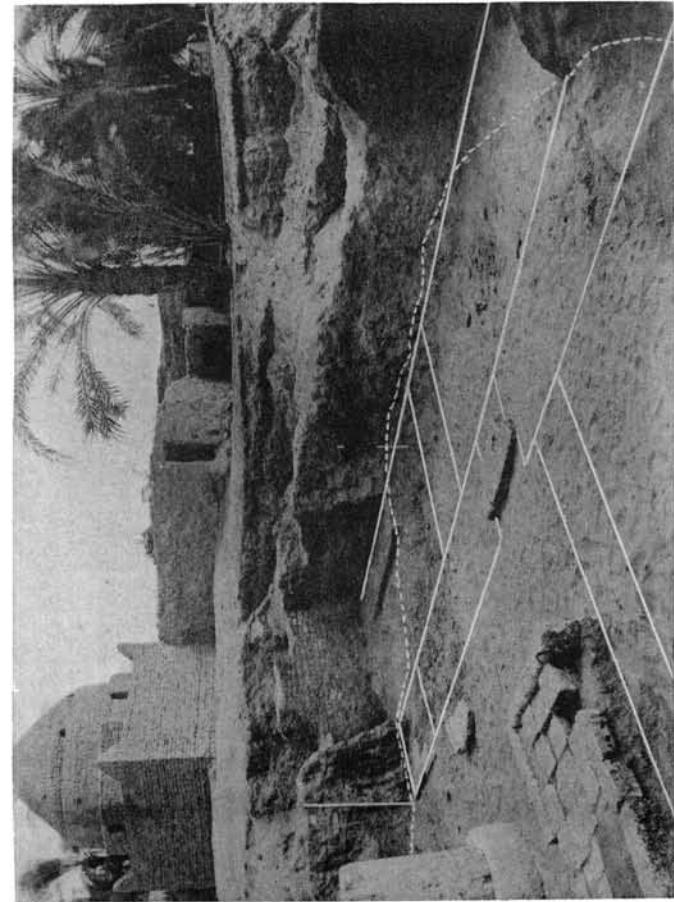
PAINTED PAVEMENT IN MARU-ATEN I

Panels 13, 14 and 15. Scale  $\frac{1}{5}$



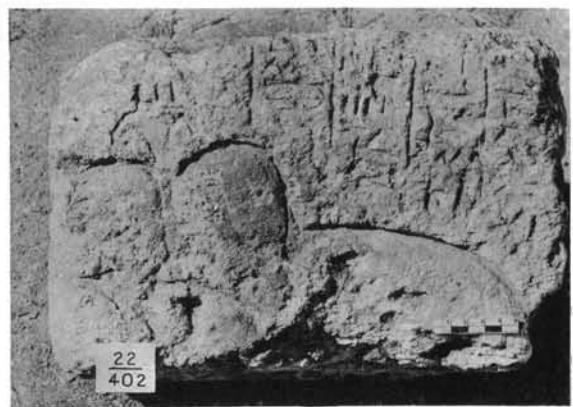
RESTORATION OF PAINTED COLUMN IN MARU-ATEN VIII







1



2



3



4



5



6

INSCRIBED BLOCKS FROM RIVER-TEMPLE  
The scale marks centimetres



1



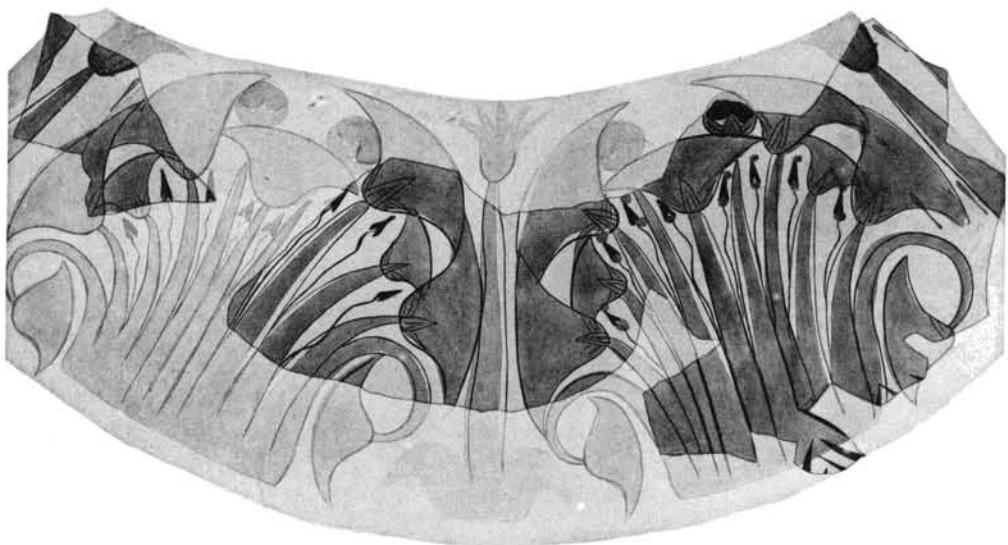
2



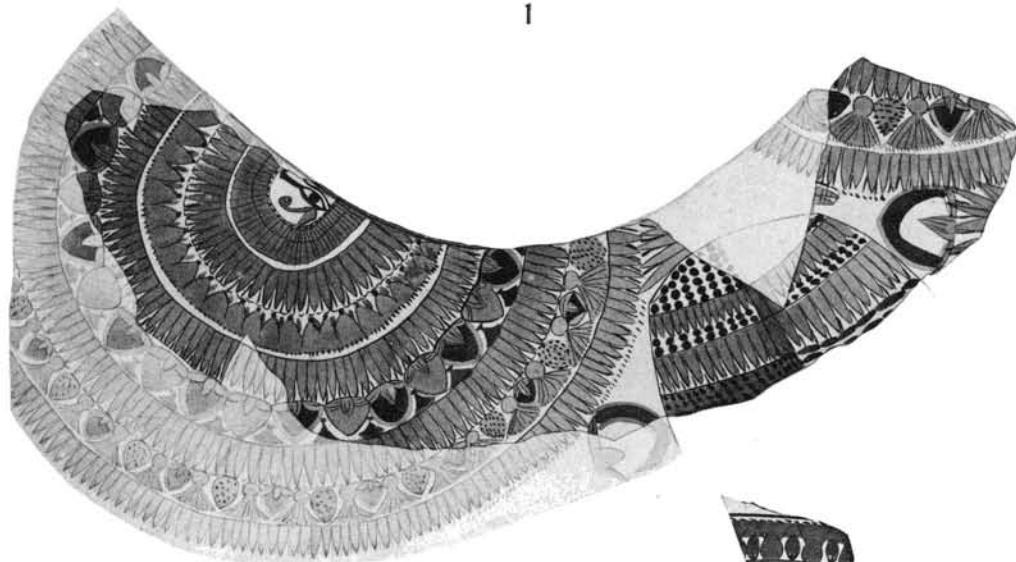
3



4



1



2



3

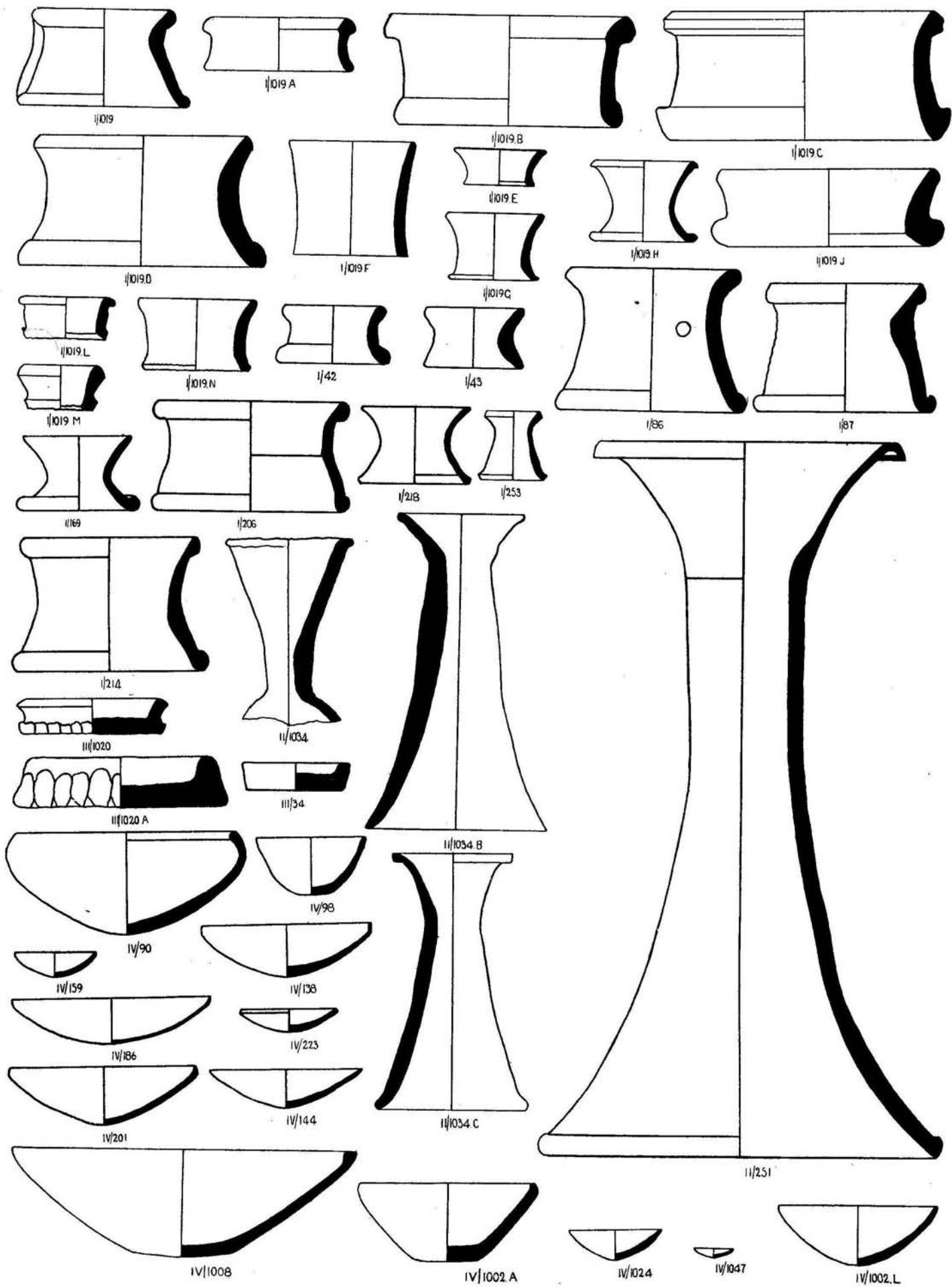


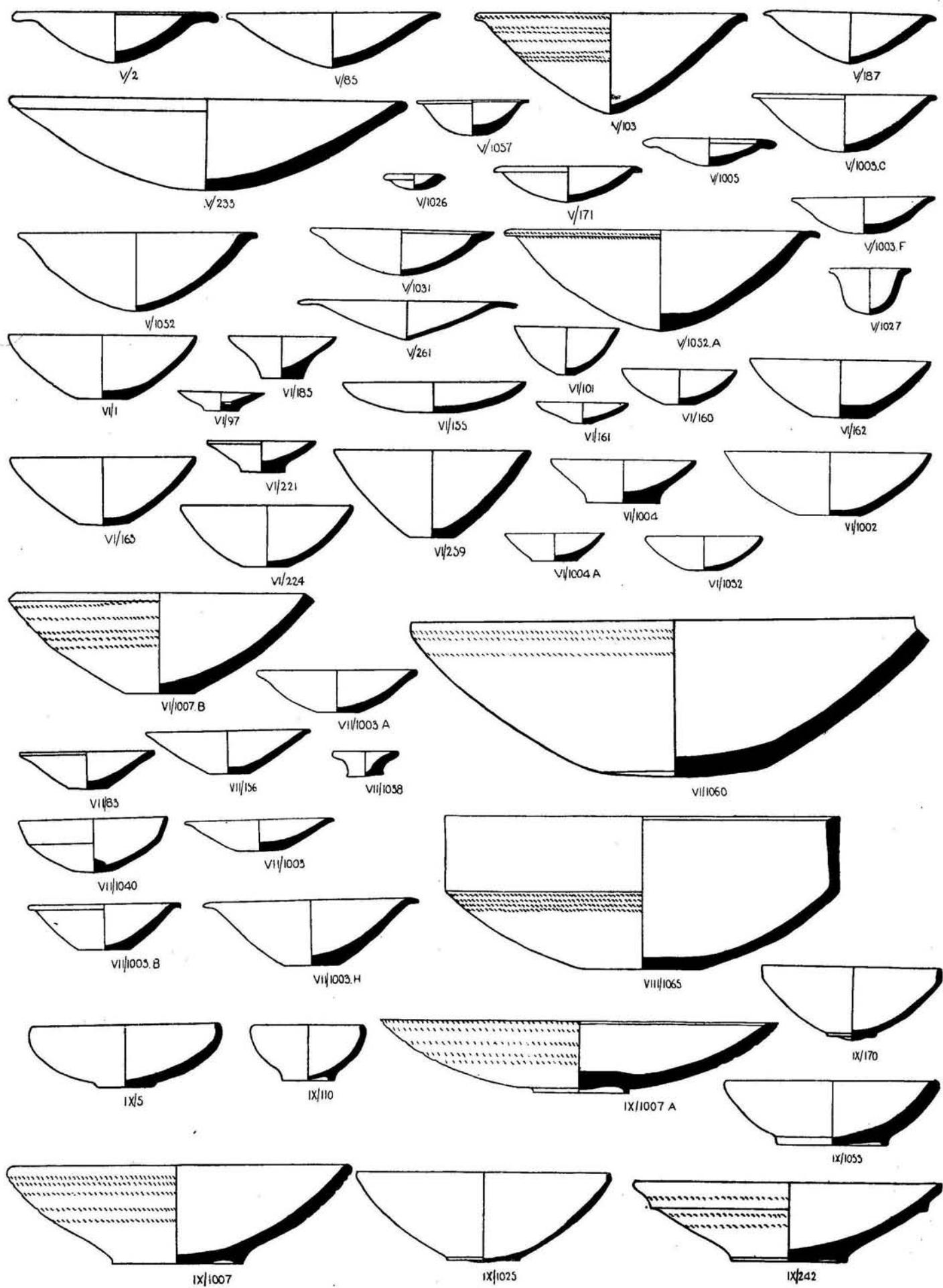
4

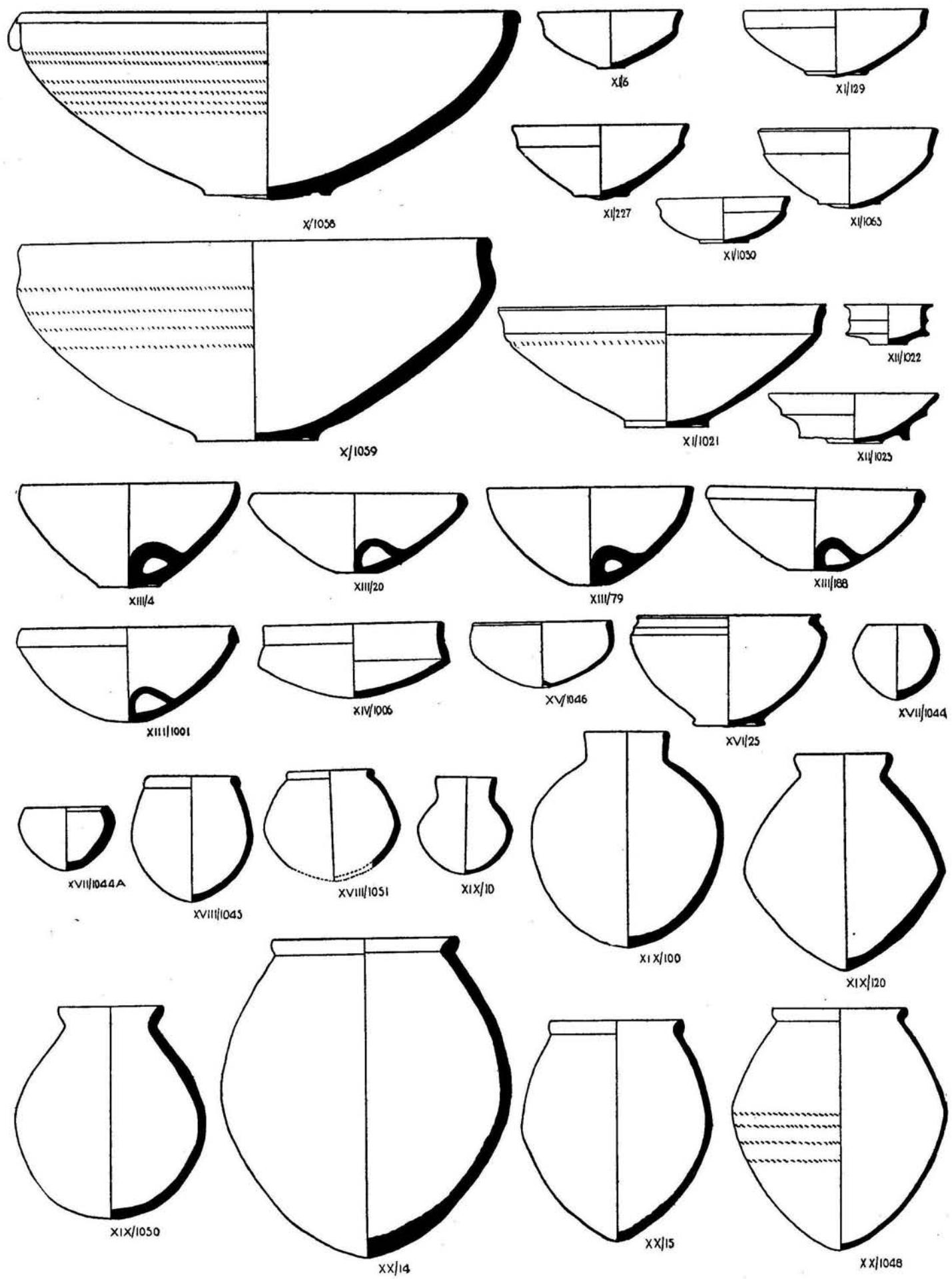


5

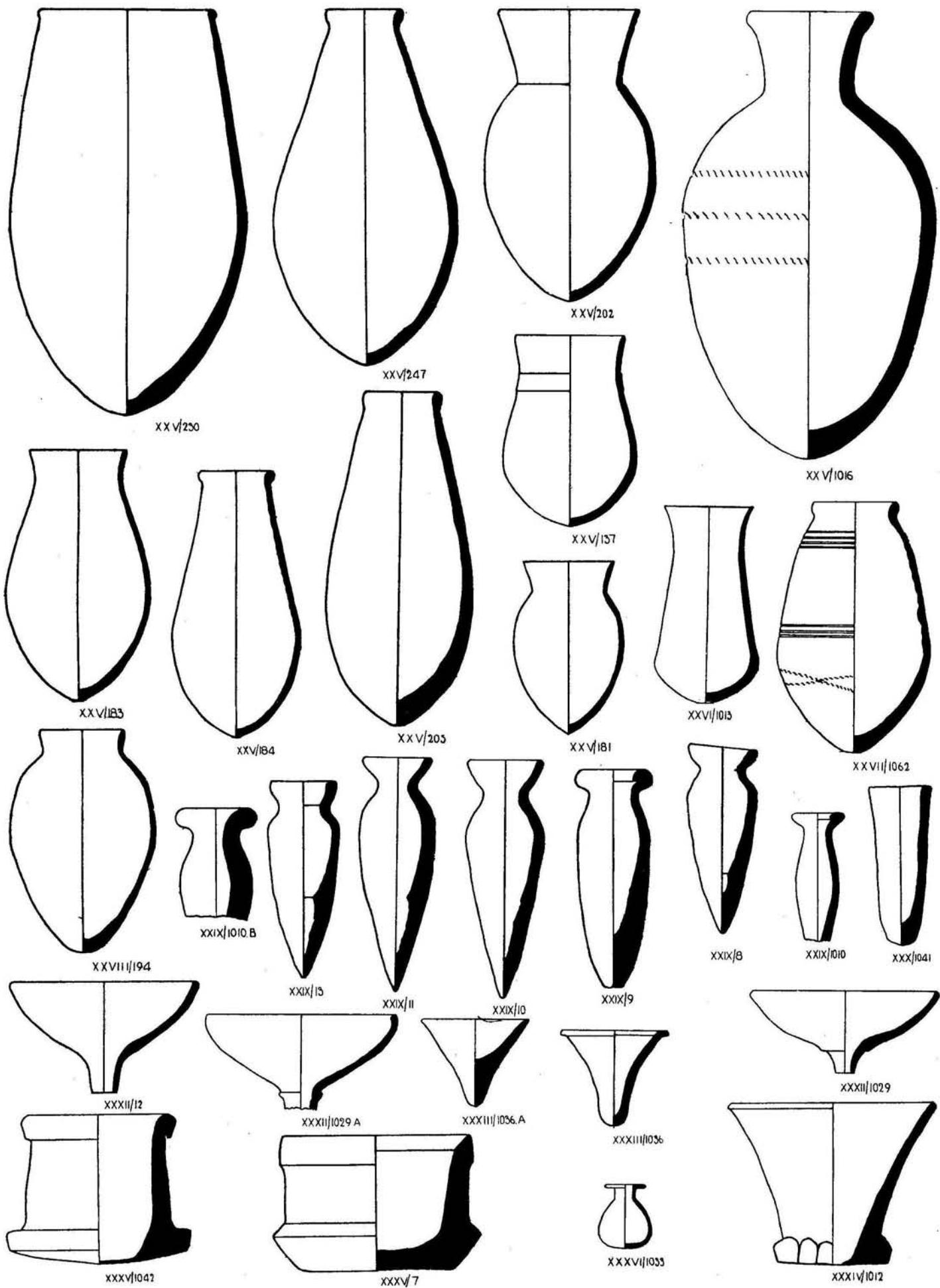
FRAGMENTS OF PAINTED POTTERY

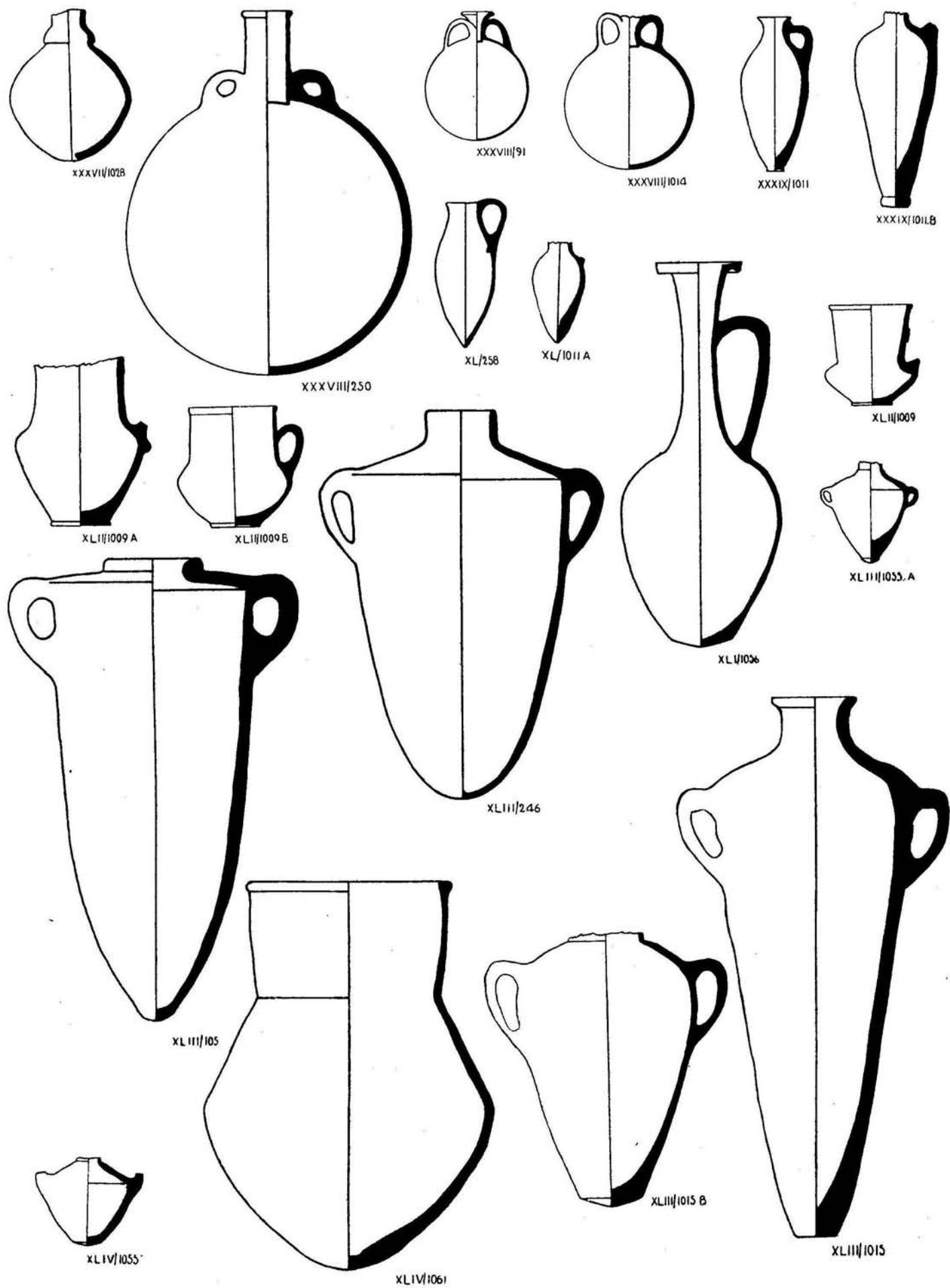


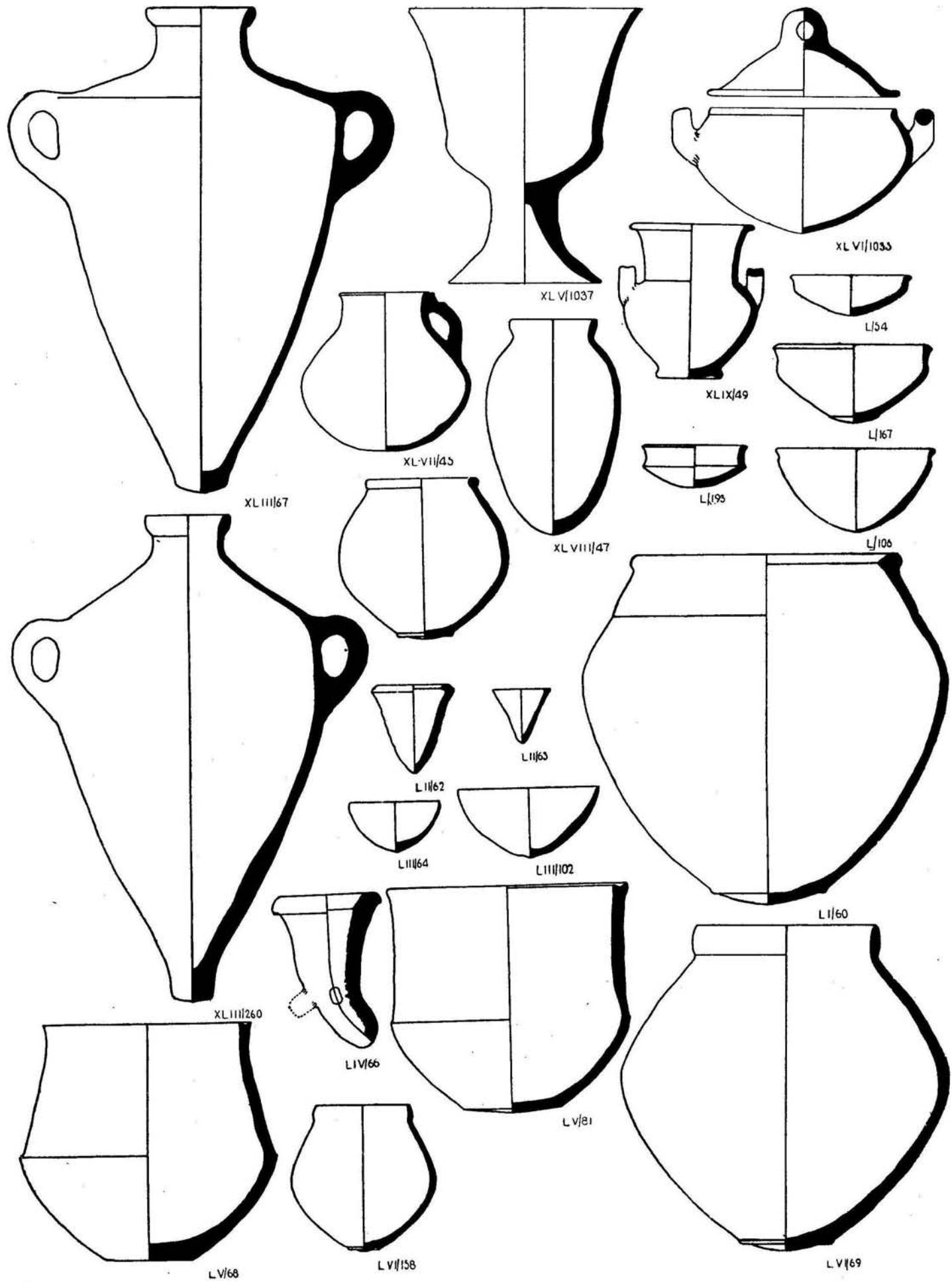


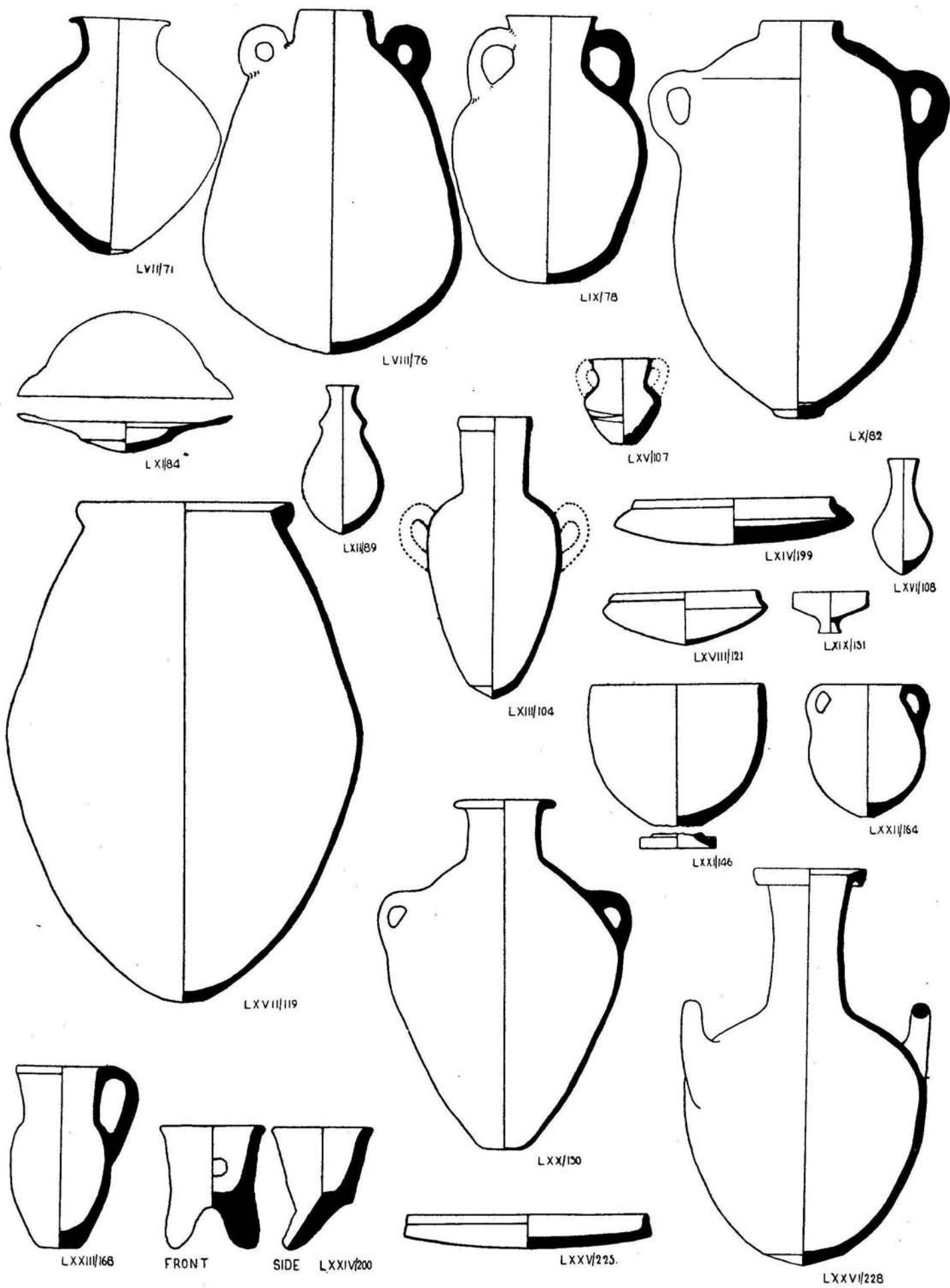


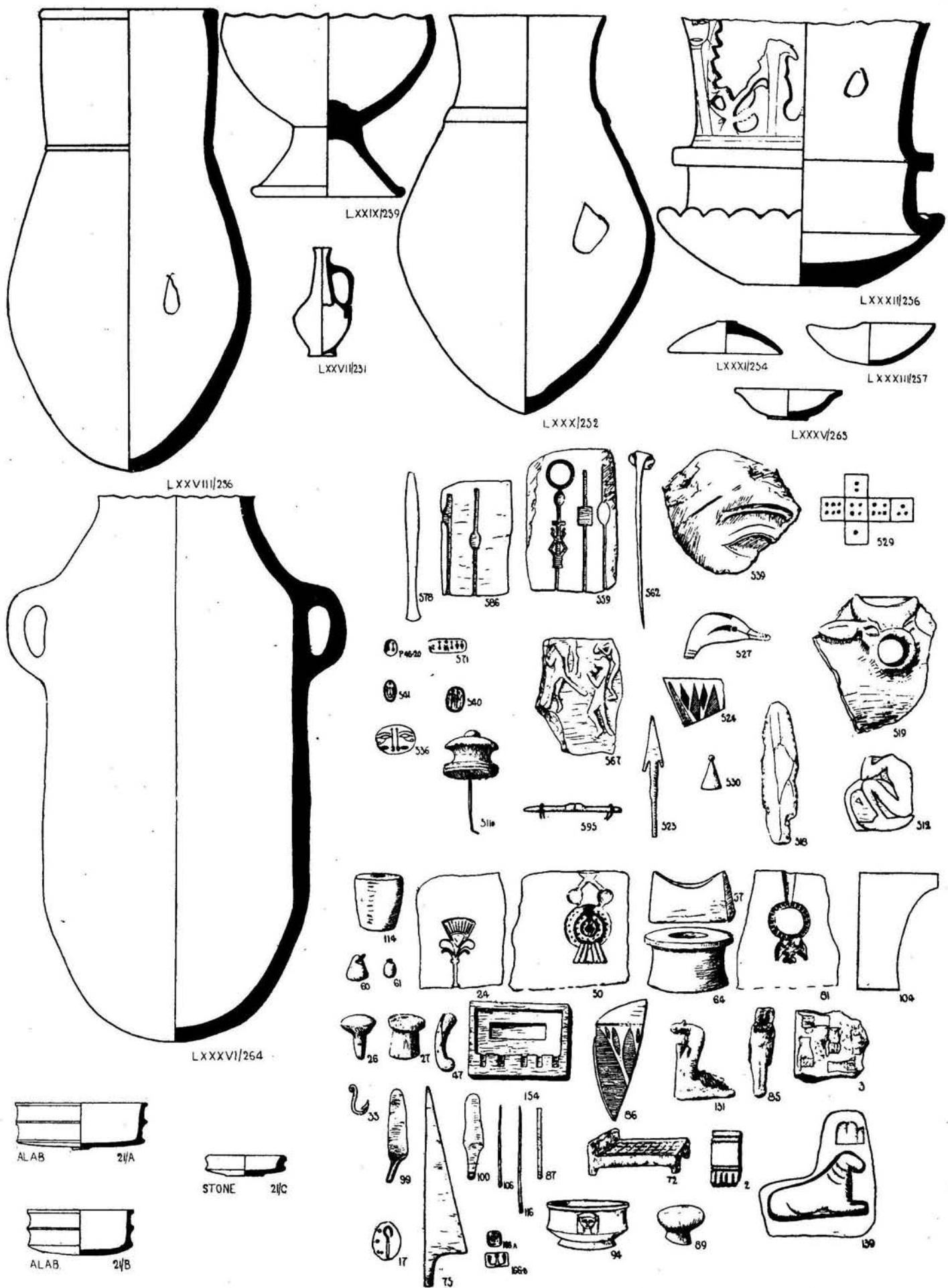


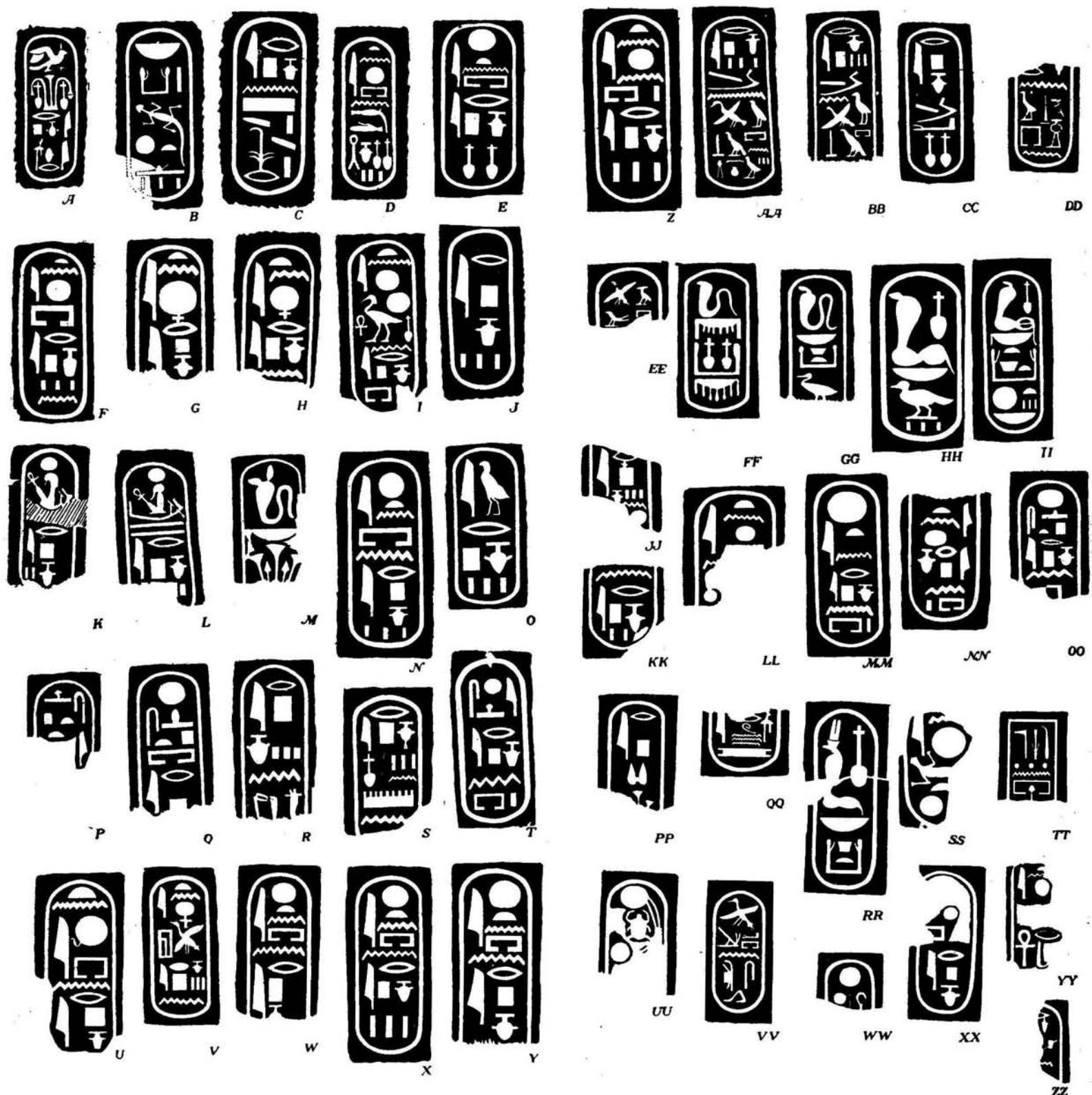




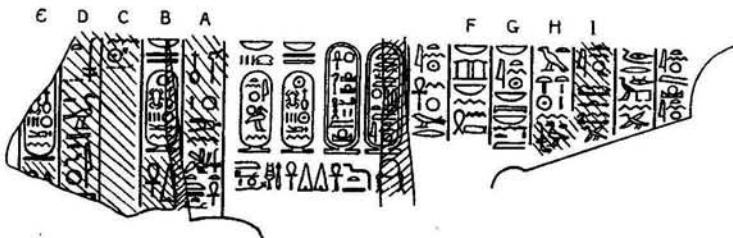




POTTERY AND STONE VASES (Scale  $\frac{1}{2}$ ) AND SMALL OBJECTS (Scale  $\frac{1}{2}$ )

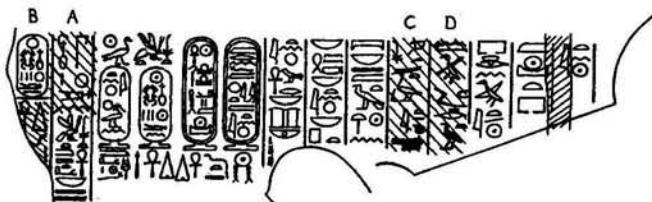


22  
273: RED GRANITE STELA  
OBVERSE



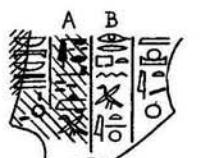
A. PROB.  $\text{dj}$  SURCH. NOT  $\text{dj}$ ;  $\text{dj}$  UNDERLIES THIS. NOTE FORM OF  $\text{dj}$  OVER.  
 B.  $\text{dj}$  SURCH. C.  $\text{dj}$  ORIG. D.  $\text{dj}$  SURCH.  $\text{dj}$  OF  $\text{dj}$  ON A FLINT.  
 E.  $\text{dj}$  SURCH.  
 F.  $\text{dj}$  FOR  $\text{dj}$ : C.F.  $\text{dj}$  FOR  $\text{dj}$ .  
 G. CORRECTED INTO  $\text{dj}$ ; LOOKS  $\text{dj}$ . H.  $\text{dj}$  ORIG.  
 I.  $\text{dj}$  SURCH.  $\text{dj}$  ORIG.

REVERSE



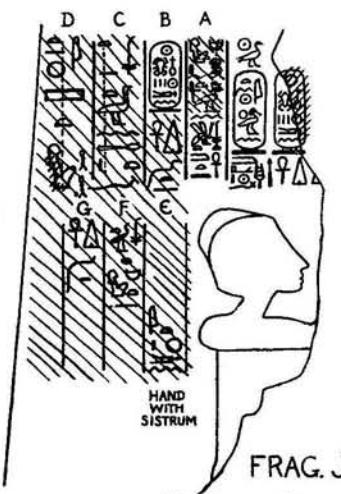
A.  $\text{dj}$  EVIDENTLY STOOD UNDER  $\text{dj}$ . C.  $\text{dj}$  SURCH. QY.  $\text{dj}$  UNDER  $\text{dj}$ ?  
 B.  $\text{dj}$  SURCH.  $\text{dj}$  ORIG.  
 D.  $\text{dj}$  OVER ORIG.  $\text{dj}$  AS IN OBV.  $\text{dj}$  MUST HAVE STOOD HERE  
 ORIGINALY, TOO: PERHAPS WRITTEN  $\text{dj}$  AND ALTERED TO FILL MORE SPACE.

22  
271: FRAGMENTS OF GRANITE STELA



A.  $\text{dj}$  SURCH. B.  $\text{dj}$  INSERTED LATER?

FRAG. B.



A. APPARENTLY SURCH.  $\text{dj}$  AND  $\text{dj}$  OVER  $\text{dj}$ , ORIG.  
 B. UNDER  $\text{dj}$  IS  $\text{dj}$

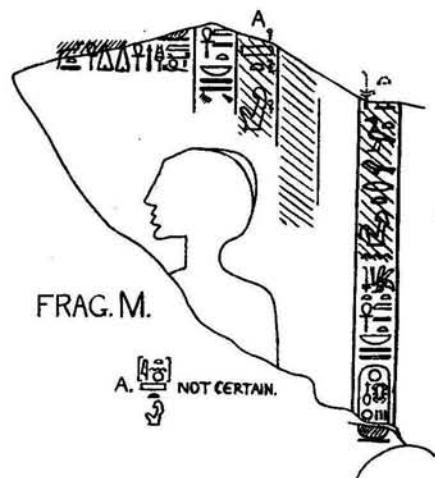
C. FIELDS OF THIS AND NEXT LINES BROADENED —  
 DOTTED LINES SHOW ORIG. BREADTHS. MANY OBSCURE  
 TRACES OF ORIG. SIGNS — MERE DENTS.

D.  $\text{dj}$  ABOUT IN MIDDLE OF ORIG. LINE. E.  $\text{dj}$  ORIG.

F.  $\text{dj}$  PROBABLY ORIG. THERE WAS PROB. A CARTOUCHE  
 IN THIS LINE, FOLLOWED BY THE  $\text{dj}$  OF G.



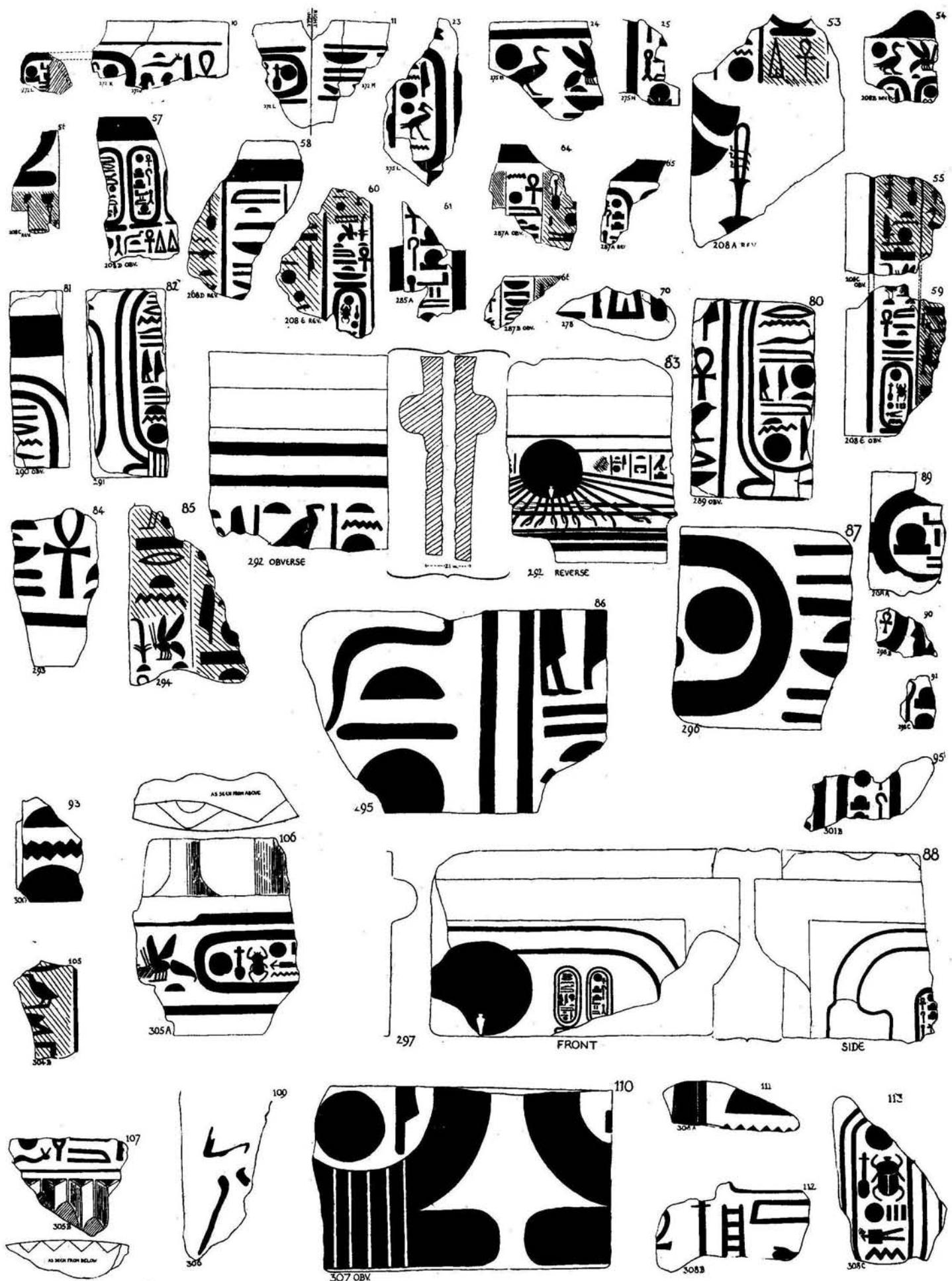
FRAG. D.



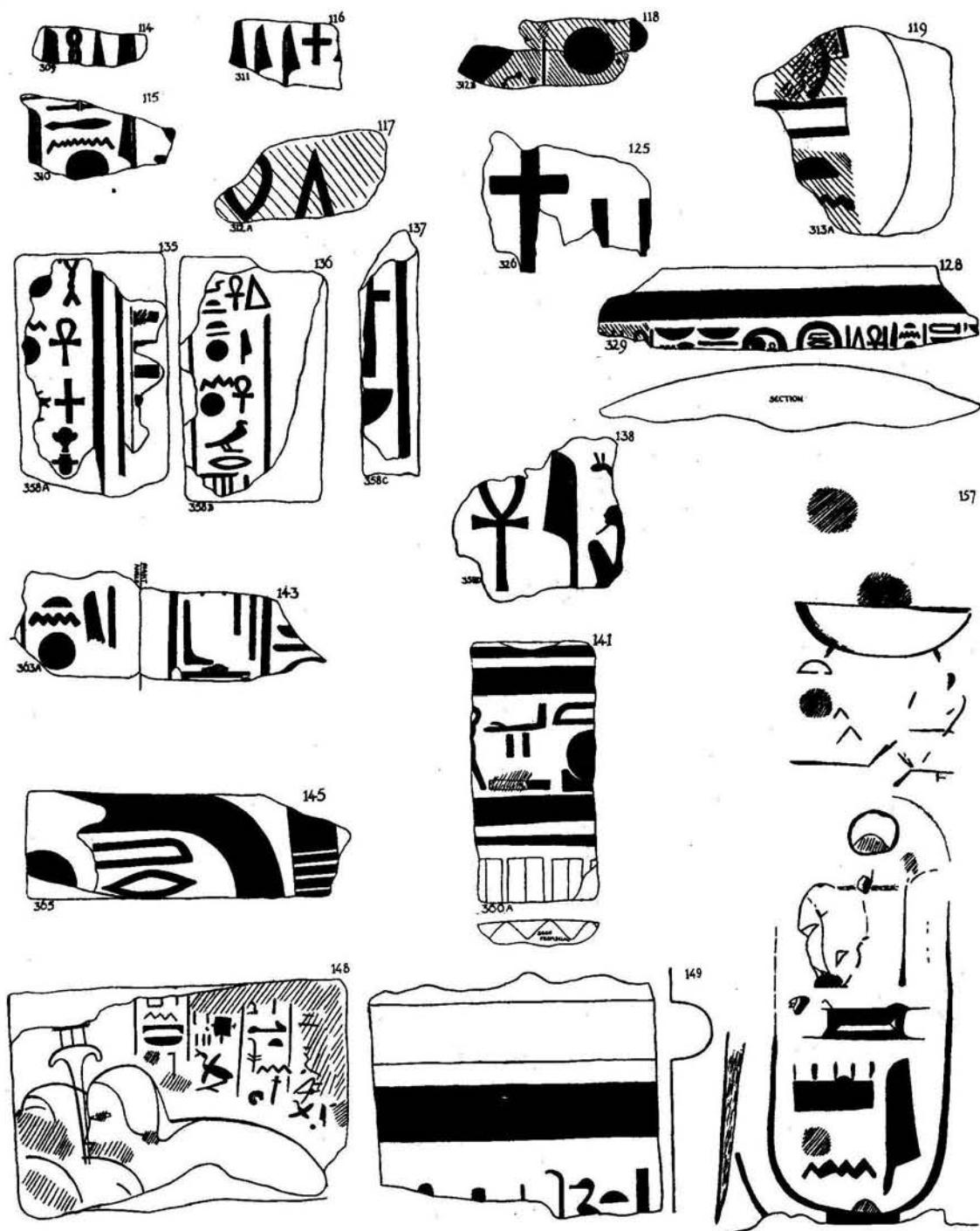
FRAG. M.

A.  $\text{dj}$  NOT CERTAIN.

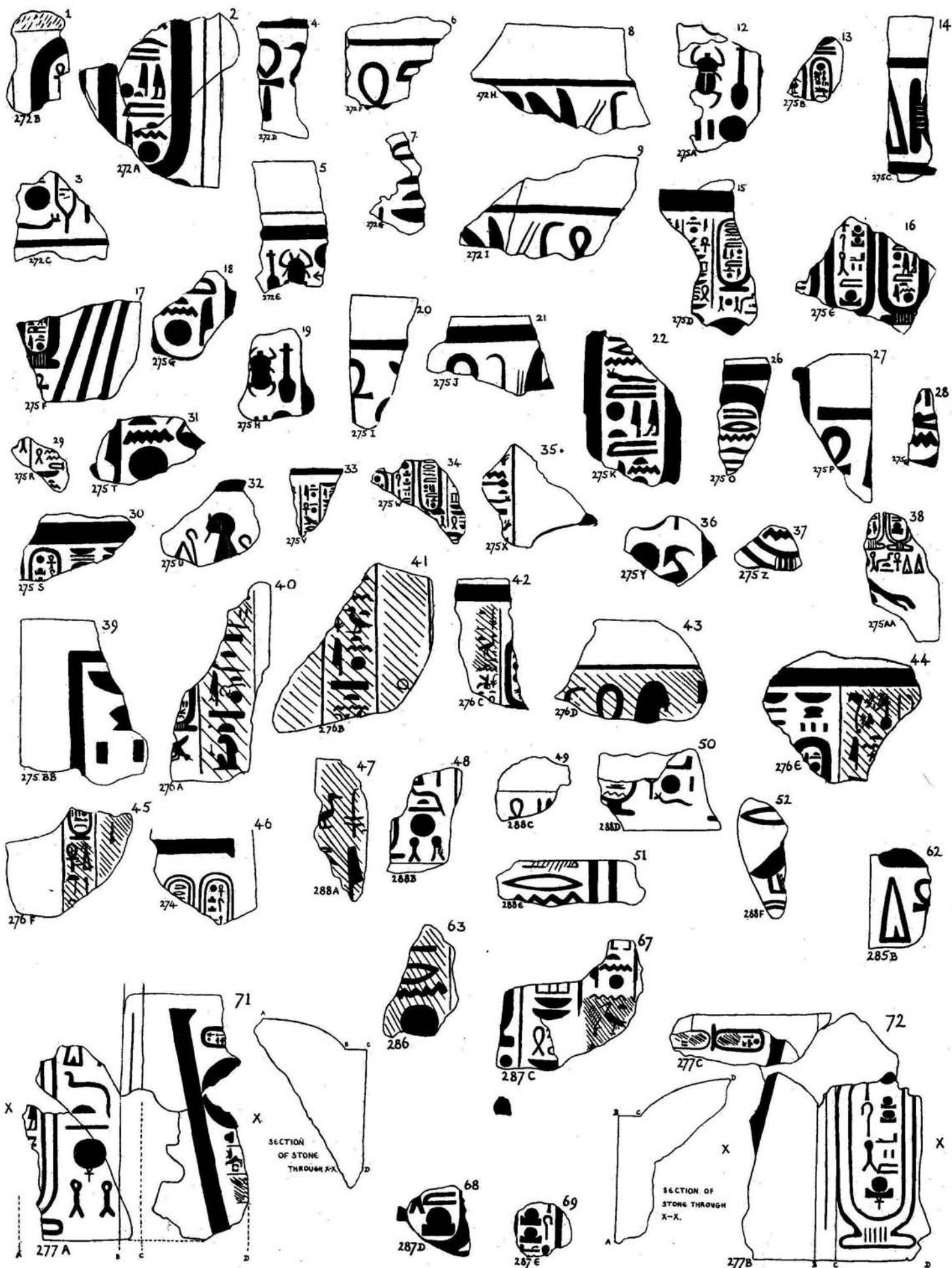
NOTES  
 IN THESE AS IN THE OTHER COPIES OF STONES FROM S.P.,  $\text{dj}$  INDICATES AN  
 INTENTIONALLY ERASED SURFACE;  $\text{dj}$  INDICATES AS USUAL, ACCIDENTAL DAMAGE.  
 MANY MARKS ON THE ERASED TRACTS ARE MERELY CHANCE STROKES OF THE  
 ERASER'S CHISEL, AND NOT REMAINS OF THE ORIGINAL SIGNS.  
 SURCH. = SURCHARGED; ORIG. = ORIGINAL.



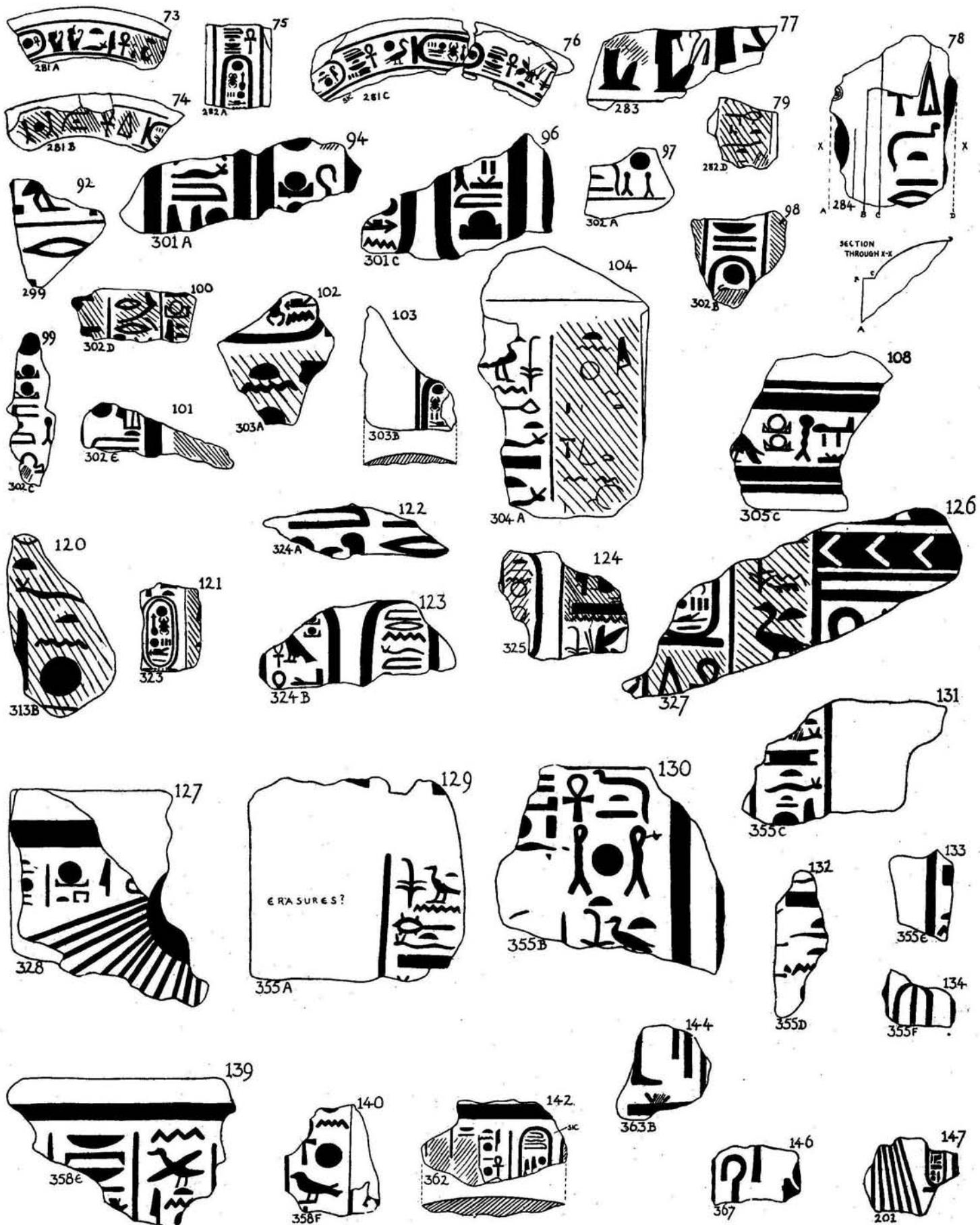
INSCRIPTIONS FROM MARU-ATEN



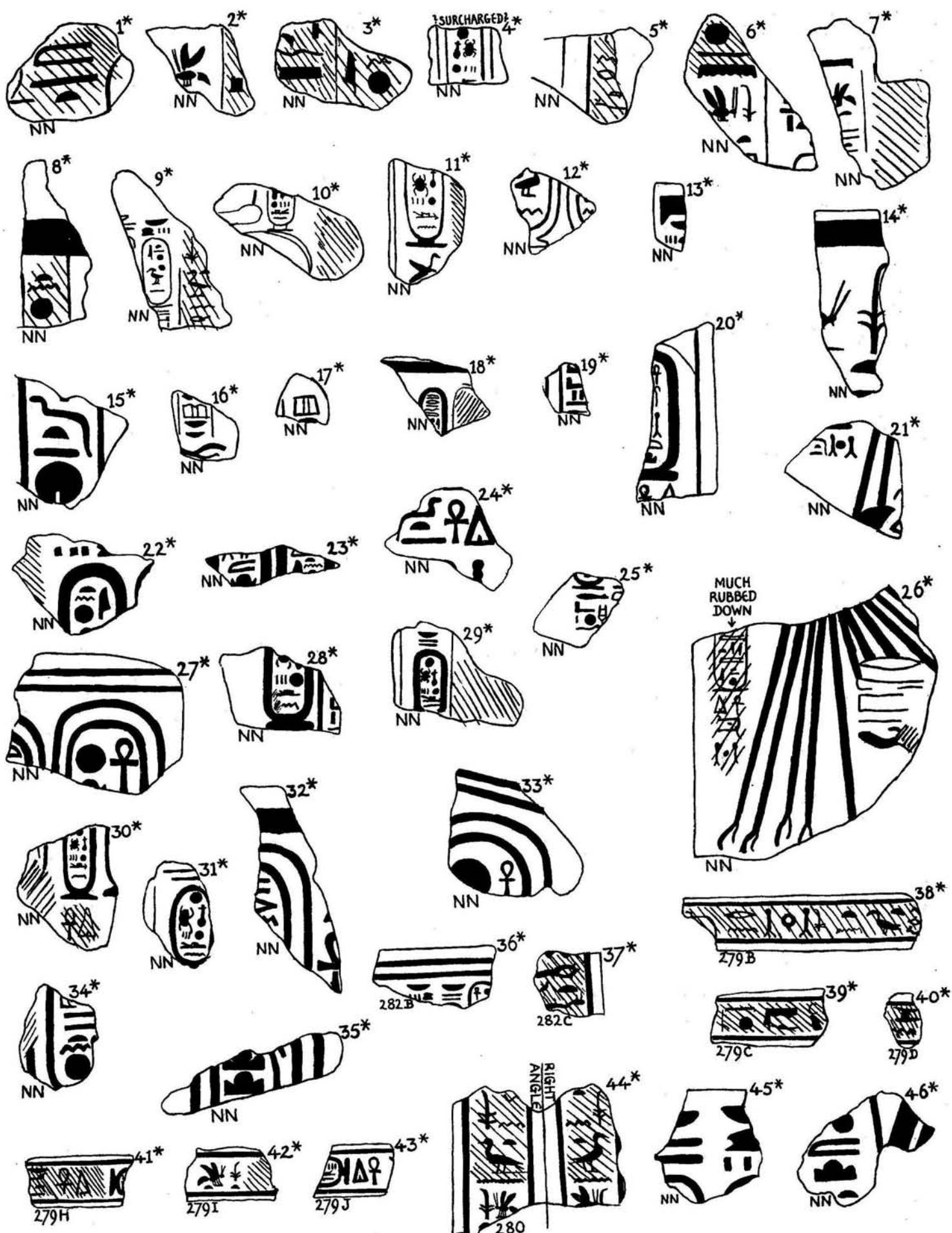
INSCRIPTIONS FROM MARU-ATEN AND FROM THE RIVER-TEMPLE



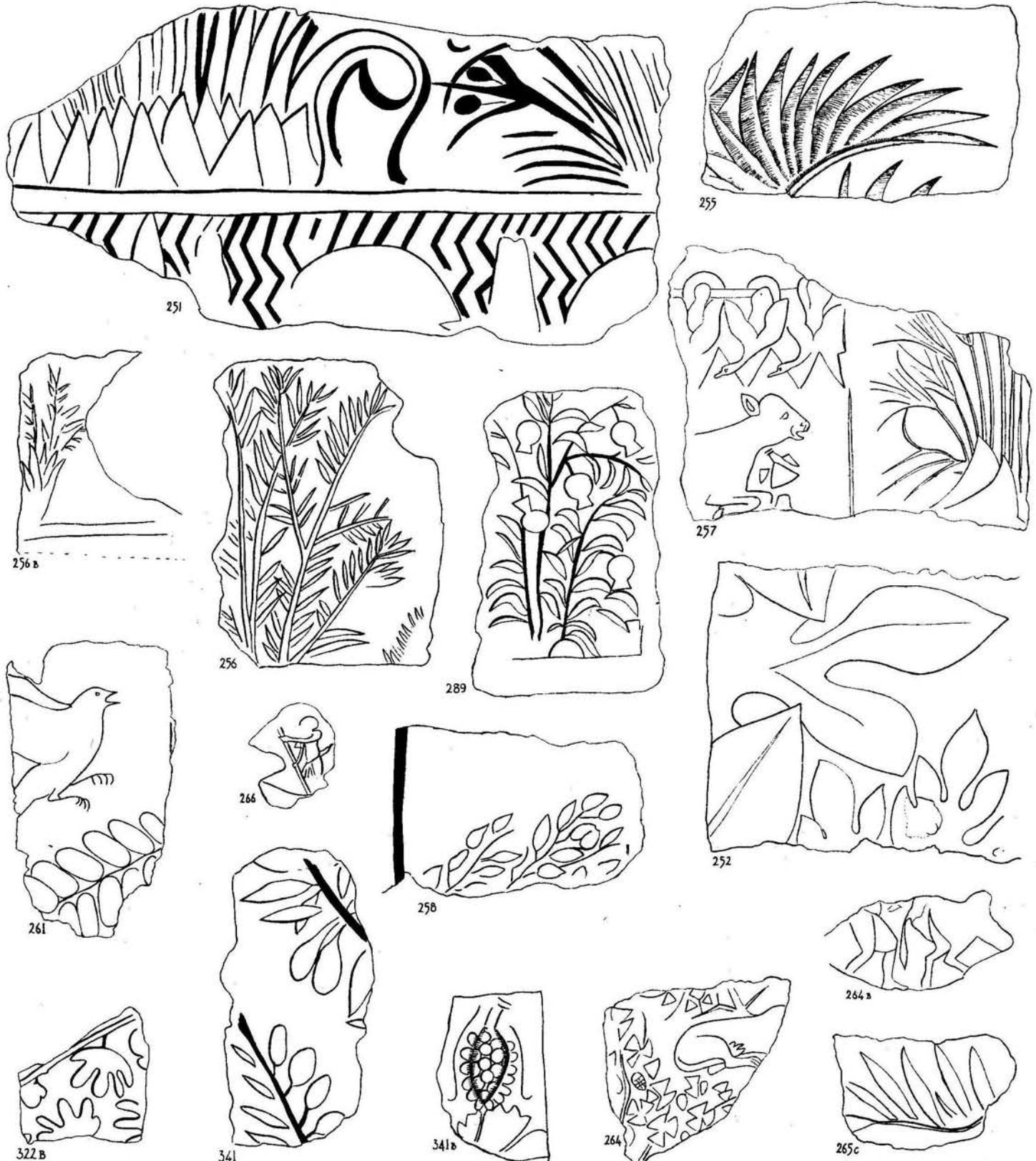
## INSCRIPTIONS FROM MARU-ATEN



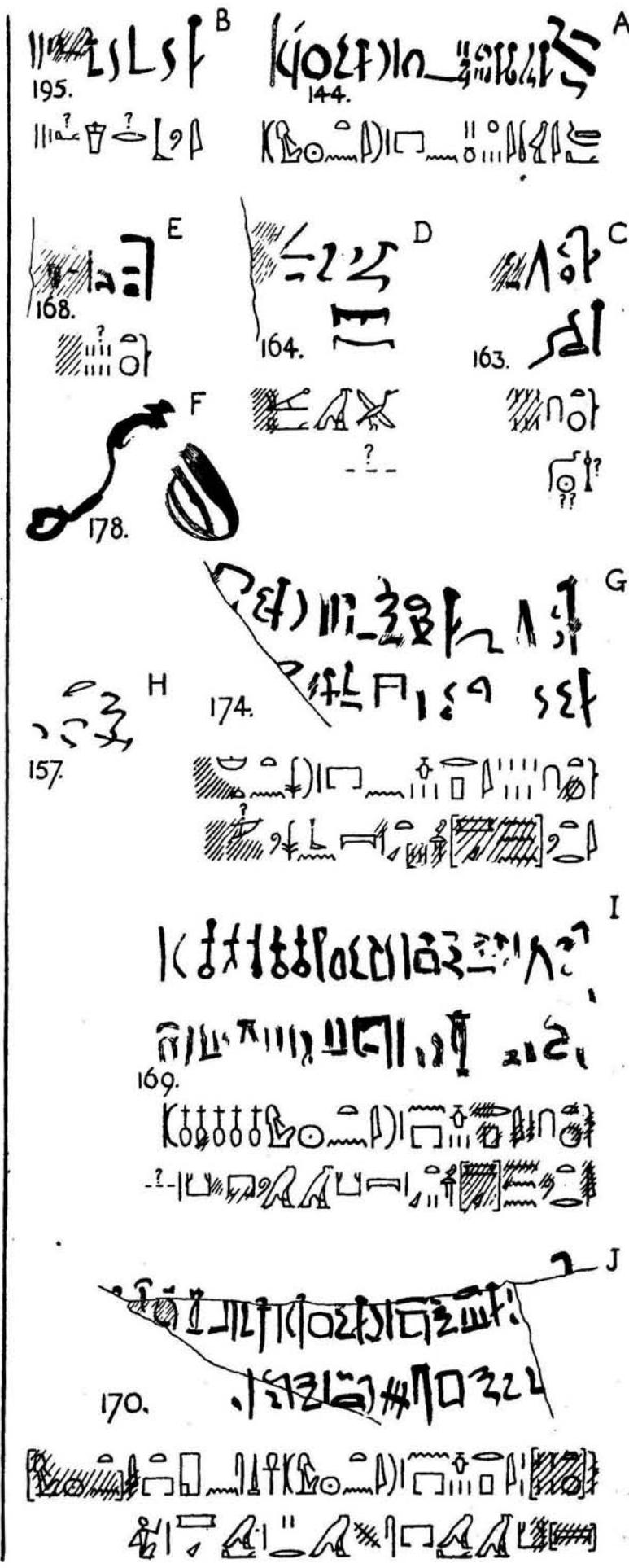
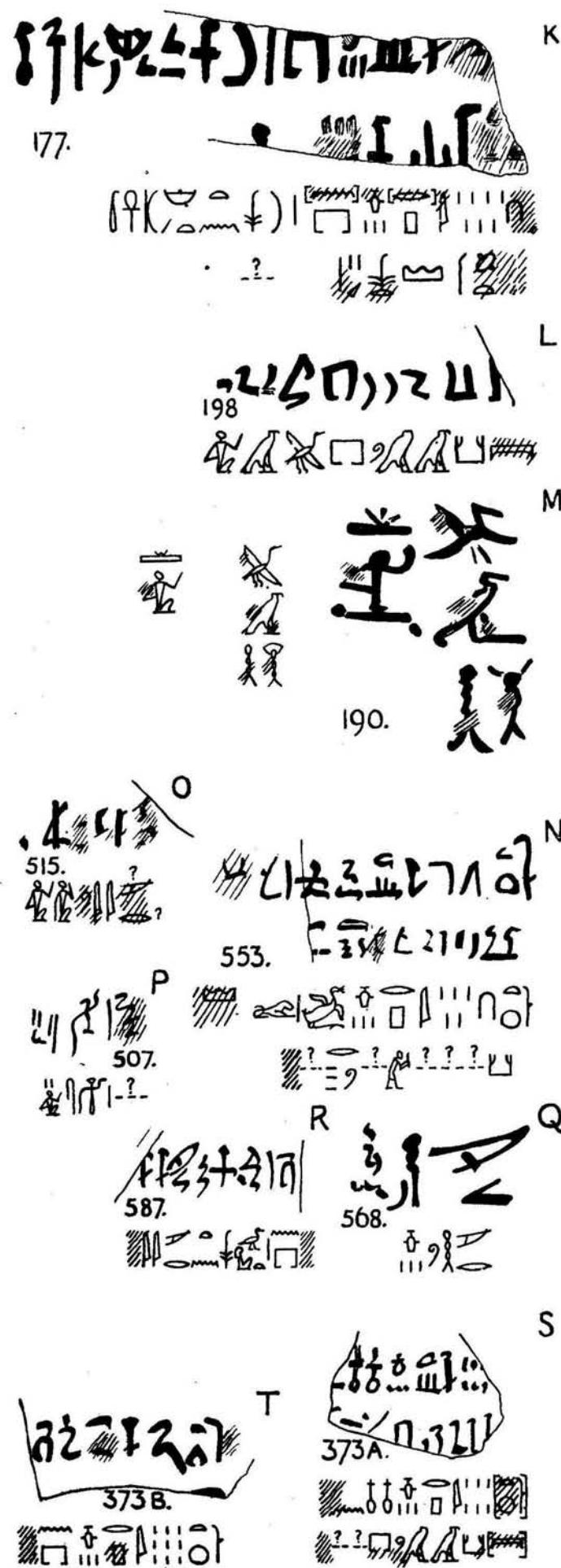
INSCRIPTIONS FROM MARU-ATEN

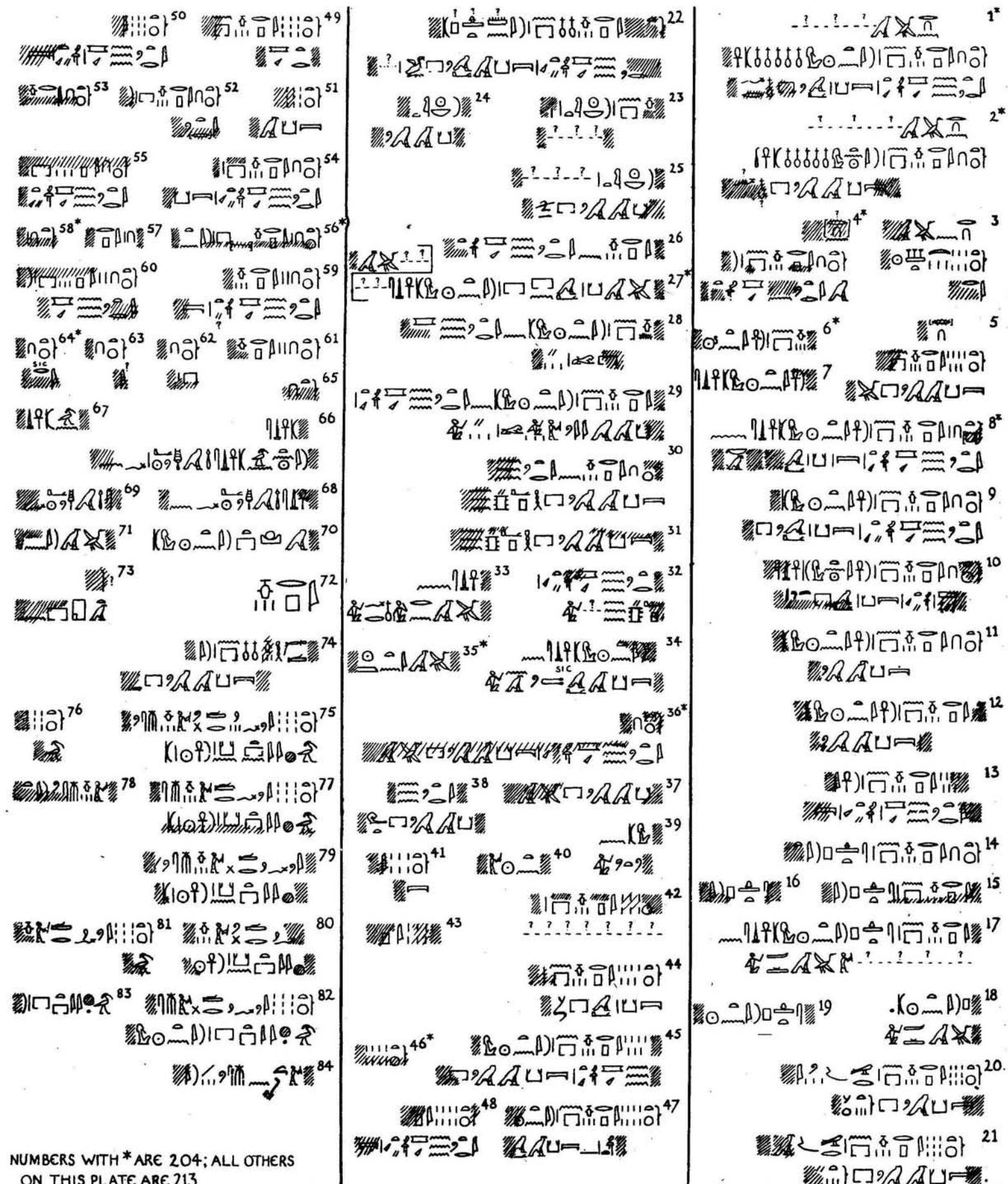


ROUGH HAND-COPIES OF INSCRIPTIONS FROM MARU-ATEN



EXAMPLES OF RELIEF DECORATION FROM MARU-ATEN





NUMBERS WITH \* ARE 204; ALL OTHERS  
ON THIS PLATE ARE 213.